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LOS ANGELES STATE COLLEGE

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UNIVERSITY OF ILLINOIS

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LOS ANGELES STATE COLLEGE OF APPLIED ARTS AND SCIENCES

VOLUME XV

SEPTEMBER 1961

CATALOG

FALL AND SPRING SEMESTERS
1961-62

SUMMER SESSION
1962

Address All Inquiries to:
5151 State College Drive
LOS ANGELES 32, CALIFORNIA

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COLLEGE CALENDAR

FALL SEMESTER 1961-62

August 15	Application and transcript deadline for new students applying for admission to the college for the fall semester. (See "Transcripts Required" section, page 51).
September 1	Deadline for returning students to reapply for admission to the college for the fall semester.
September 11-14	Advisement and registration week. Students should consult the Class Schedule for details, dates, and deadlines regarding registration.
1962 Graduates (Bachelors and Masters)	Final deadline for application for graduation in January 1962 is during the fall registration period. Final deadline for June graduation will be during the spring registration period. Final deadline for Summer Session candidates for graduation will be during the Summer Session registration period.
September 18	Instruction begins.
October 15	Deadline for filing credential application for fall 1961.
October 28	Last day to withdraw from class without risk of "F" grade.
November 10	Deadline for filing for directed teaching for spring 1962.
November 11	Veterans Day (legal holiday). No classes in session.
November 17	Optional examination to meet American government and history graduation requirements.
November 23-25	Thanksgiving holidays.
December 16	Last day to withdraw from classes.
December 18, 1961, through January 1, 1962	Christmas holidays.
January 2	Classes resume.
January 5	Application and transcript deadline for new students applying for admission to the college for the spring semester. (See "Transcripts Required" section, page 51).
January 15-25	Semester examinations.
January 26	Fall semester ends.

SPRING SEMESTER 1962

1962 Graduates	Final deadline for application for graduation in January 1962 is during the fall registration period. Final deadline for June graduation will be during the spring registration period. Final deadline for Summer Session candidates for graduation will be during the Summer Session registration period.
January 5	Application and transcript deadline for new students applying for admission to the college for the fall semester. (See "Transcripts Required" section, page 51).
January 15	Deadline for returning students to reapply for admission to the college for the spring semester.
January 29 through February 1	Advisement and registration week. Students should consult the Class Schedule for details, dates, and deadlines regarding registration.
February 5	Instruction begins.
February 22	Washington's Birthday (legal holiday). No classes in session.
March 15	Deadline for filing credential application for spring 1962.
March 17	Last day to withdraw from class without risk of "F" grade.
April 6	Deadline for filing for directed teaching for fall 1962.
April 16-21	Easter vacation.
April 27	Optional examination to meet American government and history graduation requirements.
May 12	Last day to withdraw from classes.
May 28, 29, 31, and June 1-7	Semester examinations.
May 30	Memorial Day (legal holiday). No classes in session.
June 8	Spring semester ends. Commencement.

SUMMER SESSION 1962

Summer Session Graduates	Final deadline for Summer Session candidates for graduation will be during the Summer Session registration period.
June 18	Registration for regular Summer Session only.
June 19	Instruction begins, Late Registration.
July 3	Deadline for filing credential application for Summer Session.
July 4	Legal holiday. No classes in session.
July 27	Final examinations. Summer Session ends.

POST SUMMER SESSION 1962

July 30	Post Session registration.
July 31	Post Session begins.
August 24	Post Session examinations. Post Session ends.

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CALIFORNIA STATE DEPARTMENT OF EDUCATION

Roy E. Simpson Superintendent of Public Instruction
State Director of Education
Don R. Youngreen Acting Chief, Division of State Colleges
and Teacher Education

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ROY E. SIMPSON, Secretary and Executive Officer

On July 1, 1961, the administration and control of the California State Colleges will be transferred from the State Board of Education to the Trustees of the State College System as provided by Chapter 49, Statutes of 1960, First Extraordinary Session.

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Government, Department Head.....	
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Philosophy, Department Head.....	Sidney P. Albert
Psychology, Department Head.....	Howard E. Wilkening
Social Studies, Adviser.....	T. A. Potter
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Bibliographer.....	Karl Keithahn
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Serials Department.....	Ruth Funderburk
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Science and Technology Department.....	Audrey Hawk
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Circulation Department.....	Kenneth Ames
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FACULTY 1961-1962

FULL TIME FACULTY 1961-62

HOWARD S. McDONALD (1949)	President
B.S., 1921, Utah State Agricultural College; M.A., 1925, Ed.D., 1949, University of California at Berkeley.	
GEORGIA SACHS ADAMS (1956)	Associate Professor of Education
A.B., 1933, M.S. in Ed., 1935, Ph.D., 1941, University of Southern California.	
LEONARD L. ADAMS (1951)	Professor of Physical Education
B.S., 1942, Drake University.	
FRANZ ADLER (1960)	Associate Professor of Sociology
L.L.D., 1933, University of Vienna; M.A., 1942, American University; Ph.D., 1953, University of Wisconsin.	
HERTHA E. AIELLO (1959)	Assistant Professor of Nursing
B.S., 1944, M.A., 1947, Columbia University	
SYLVIA ALAVA (1960)	Assistant Science and Technology Librarian
Certificate in Pharmacy, 1958, University of Helsinki; M.S. in L.S., 1961, University of Southern California.	
GERHARD ALBERSHEIM (1956)	Associate Professor of Music
Ph.D., 1938, University of Vienna.	
SIDNEY P. ALBERT (1956)	Associate Professor of Philosophy
B.S., 1934, Syracuse University; Ph.D., 1939, Yale University.	
JACK ALCALAY (1960)	Assistant Professor of Engineering
B.S. in C.E., 1954, Technion, Israel; M.S. in C.E., 1957, University of Michigan.	
HENRY A. ALEXANDER, JR. (1958)	Assistant Professor of Philosophy
B.A., 1947, Princeton University; M.A., 1951, Ph.D., 1955, University of California at Berkeley.	
JESSE B. ALLEN (1958)	Professor of Marketing
B.A., 1941, Berea College; M.S., 1942, Indiana University; Ph.D., 1952, University of Chicago.	
LAIRD B. ALLISON (1956)	Assistant Professor of Management
B.S., 1956, University of Southern California; M.B.A., 1958, University of California at Los Angeles.	
ROGER M. ALTENBERG (1954)	Assistant Professor of Drama
A.B., 1945, University of Southern California; M.A., 1948, Western Reserve University.	
KENNETH AMES (1960)	Supervising Circulation Librarian
B.A., 1945, University of London; A.L.A., 1950, Dewsbury Technical College.	
ROBERT AMES (1956)	Assistant Professor of Education
A.B., 1952, M.A., 1954, Ph.D., 1956, University of California at Berkeley; Certified Psychologist, 1959, California.	
DANIEL A. AMNEUS (1950)	Associate Professor of English
A.B., 1941, University of California at Berkeley; M.A., 1947, Ph.D., 1953, University of Southern California.	
DEAN A. ANDERSON (1950)	Professor of Microbiology
B.S., 1929, Brigham Young University; M.S., 1930, Ph.D., 1932, Iowa State University.	
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B.A., 1931, University of California at Berkeley.	
A. E. ANDREOLI (1958)	Assistant Professor of Engineering
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REIDAR ARDEN (1959)	Health Officer
B.A., 1950, Pacific Union College; M.D., 1955, College of Medical Evangelists.	
LAWRENCE ARNOLD (1959)	Instructor in Mathematics
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- WALTER M. ASKIN (1956).....Associate Professor of Art
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- ARTHUR A. ATTWELL (1960).....Assistant Professor of Education
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- JOHN M. AUSTIN (1960).....Assistant Professor of Education
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- LEO J. BARANSKI (1960).....Assistant Professor of Psychology
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- FRANCIS H. BAXTER (1950).....Professor of Music
B.M., 1935, University of Wichita; M.M., 1940, Northwestern University; D. of M.A., 1960, University of Southern California.
- WALTER S. BEAVER (1956).....Assistant Professor of Drama
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- JOSEPH R. BECKSTEAD (1951).....Associate Professor of Music
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- DORIS L. BELL (1960).....Assistant Acquisitions Librarian
B.A., 1957, Los Angeles State College.
- VIRGINIA LEE BELL (1959).....Assistant Professor of Physical Education
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- EUGENE BENEDETTI (1950).....Professor of Education
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- GORDON W. BERTRAM (1959).....Associate Professor of Economics
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- THOMAS D. BEST (1959).....Assistant Professor of Geography
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- MORRIS BETTER (1956).....Assistant Professor of Education
B.S., 1946, M.S., 1948, Ed.D., 1961, Wayne State University.
- HAROLD J. BIENVENU (1960).....Professor of Education
Ph.B., 1948, Marquette University; M.A., 1951, Ed.D., 1956, Stanford University.
- DAVID BILOVSKY (1956).....Associate Professor of Education
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- DONALD A. BIRD (1956).....Associate Professor of English
B.A., 1940, M.A., 1941, Ph.D., 1950, University of Wisconsin.
- A. LEROY BISHOP (1950).....Professor of Education
B.S., 1935, Utah State University; M.S., 1939, University of Southern California; Ed.D., 1946, Colorado State College of Education.
- ELLENORE C. BISHOP (1959).....Fine Arts Librarian
B.A., 1939, University of Oregon; B.L.S., 1942, University of California at Berkeley.

- THOMPSON BLACK, JR. (1950).....Professor of Government
and Chairman, Division of Social Sciences
B.S., 1933, United States Naval Academy; M.A., 1949, Ph.D., 1954, University of California
at Los Angeles.
- ROBERT E. BLACKMON (1960).....Assistant Professor of Journalism
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- BETTY LOU BLACKWELL (1958).....Assistant Professor of Nursing
B.S., 1949, University of Cincinnati; M.S., 1958, University of California at Los Angeles;
R.N., 1947, Arizona and California.
- REXFORD W. BOLLING (1959).....Assistant Professor of Education
B.Ed., 1942, Fredonia State Teachers College; M.S., 1945, Syracuse University; Ed.D., 1960,
University of Southern California.
- HUGH S. BONAR, JR. (1954).....Assistant Professor of History
B.A., 1947, M.A., 1948, Ph.D., 1952, University of Wisconsin.
- FLORENCE M. BONHARD (1949).....Professor of Foreign Languages
B.A., 1921, Stanford University; M.A., 1927, Columbia University; Ph.D., 1946, University
of Southern California.
- IRVIN BORDERS (1951).....Associate Professor of Journalism and Business Administration
B.J., 1925, University of Missouri; M.A., 1952, Los Angeles State College.
- CHARLES E. BORMAN (1960).....Assistant Professor of Art
B.A., 1953, M.A., 1959, Los Angeles State College.
- MARILYN T. BOSWELL (1960).....Instructor in Mathematics
B.A., 1958, University of California at Riverside; M.S., 1961, Stanford University.
- GEORGE B. BOUSE (1959).....Assistant Professor of Engineering
B.S., 1954, University of California at Los Angeles; Registered Professional Engineer, 1958,
California.
- ANDREW L. BOWMAN (1960).....Assistant Professor of Philosophy
B.A., 1949, Stanford University; M.A., 1950, Ph.D., 1951, Columbia University.
- CAROLYN J. BOWMAN (1961).....Assistant Professor of Nursing
B.S., 1954, St. Louis University; M.S., 1960, University of California at Los Angeles; R.N.,
1951, California.
- HARRY BRAND (1960).....Assistant Professor of English
A.B., 1949, Trinity College; M.A., 1953, University of California at Los Angeles.
- ROBERT V. BRASS (1960).....Associate Dean of Student Personnel—Student Activities
A.B., 1946, Boston University; M.S., 1951, Ph.D., 1956, Purdue University.
- WARREN C. BRAY (1959).....Associate Professor of Accounting
B.S., 1938, University of Massachusetts; M.A., 1943, Columbia University; Ph.D., 1958, New
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- WILLIAM H. BRIGHT (1950).....Associate Professor of Business Administration
B.A., 1949, Los Angeles State College; M.B.A., 1950, University of California at Los Angeles.
- ALLEN P. BRISTOW (1959).....Assistant Professor of Police Administration
B.A., 1952, Los Angeles State College; M.S., 1957, University of Southern California.
- HELEN BROCKLEHURST (1960).....Assistant Professor of Education
A.B., 1955, M.A., 1956, Los Angeles State College; Certified Psychologist, 1958, California.
- WINONA NOLAND BROOKS (1959).....Assistant Professor of Home Economics
B.S., 1939, University of Tennessee; M.S., 1955, University of Alabama.
- CLAYTON M. BROWN (1959).....Supervising Language Arts Librarian
B.A., 1950, University of California at Santa Barbara; M.A., 1952, B.L.S., 1954, University
of California at Berkeley.
- JAMES V. BROWN (1960).....Assistant Social Sciences Librarian
B.S., 1950, Cornell University; M.S.L.S., 1958, Western Reserve University.
- MARJORIE BROWN (1959).....Assistant Professor of Education
B.A., 1924, Carleton College; M.A., 1932, University of Southern California.
- RICHARD DEAN BURNS (1960).....Assistant Professor of History
B.S., 1957, M.A., 1958, Ph.D., 1960, University of Illinois.
- JOHN C. BUSHMAN (1953).....Associate Professor of English
B.A., 1936, M.A., 1937, Ph.D., 1943, University of Illinois.
- H. RANDALL BUTLER (1954).....Chief, Library Technical Services
B.A., 1951, M.A., 1952, B.L.S., 1954, University of California at Berkeley.
- CHARLES N. BUTT (1955).....Assistant Professor of Education
B.S., 1928, M.A., 1936, University of Washington.

- WILLIAM G. BYRON (1954).....Associate Professor of Geography
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B.A., 1936, University of Iowa; M.A., 1951, University of North Carolina.
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B.S., 1947, Missouri University; M.B.A., 1948, Ph.D., 1953, Ohio State University.
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Graduate School.
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B.A., 1941, B.S., 1942, M.S., M.Ed., 1953, University of Southern California; Certified
Public Accountant, 1948, California.
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B.A., 1952, Brigham Young University.
- PHILIP FRIEDMAN (1959).....Assistant Professor of English
A.B., 1948, New York University; M.A., 1949, Columbia University.
- DAVID M. FRISCH (1959).....Assistant Professor of Chemistry
B.S., 1943, University of California at Berkeley; M.S., 1951, Ph.D., 1960, University of
Southern California.
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A.B., 1946, City College of New York; M.A., 1948, Columbia University; Ph.D., 1960,
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A.B., 1951, University of Illinois; M.A., 1953, University of Toronto; Ph.D., 1959, Wayne
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B.A., 1942, Manchester College; B.S.L.S., 1946, M.A., 1952, University of Illinois.
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B.A., 1960, Los Angeles State College.
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A.B., 1947, Colgate University; M.S., 1949, Brigham Young University; Ph.D., 1953, Uni-
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B.A., 1922, M.A., 1924, University of Washington; Ph.D., 1938, Columbia University.
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A.B., 1952, University of California at Los Angeles; A.M., 1954, Ph.D., 1959, University of
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B.A., 1948, Willamette University; M.S., 1950, University of Oregon; Ph.D., 1953, Stan-
ford University; Certified Psychologist, 1959, California.

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B.S., 1949, City College of New York; M.A., 1952, Ph.D., 1953, University of California at Los Angeles; Certified Psychologist, 1958, California.
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- MARY W. HUBER (1952).....Professor of Speech
B.S., 1939, M.A., 1940, Ph.D., 1945, University of Wisconsin.
- CURTISS HUNGERFORD (1957).....Administrative Assistant to the President
A.B., 1952, Stanford University; M.A., 1955, University of Southern California.
- ROLAND D. HUTCHINSON (1950).....Assistant Professor of Psychology
B.A., 1948, M.A., 1951, University of California at Los Angeles.
- JEROME A. HUTTO (1960).....Assistant Professor of Education
A.B., 1934, St. Norbert College; M.A., 1946, University of Minnesota; Ed.D., 1960, University of California at Berkeley.
- EARL D. JACOBS (1954).....Assistant Professor of Physics
B.S., 1953, M.S., 1954, California Institute of Technology.
- DAVID L. JACOBSON (1960).....Assistant Professor of Health and Safety Education
B.A., 1952, Los Angeles State College; LL.B., 1956, University of Southern California; M.A., 1957, Los Angeles State College; admitted to California State Bar, 1957.
- SIGMUND JAFFE (1958).....Associate Professor of Chemistry
A.B., 1949, Wesleyan University; Ph.D., 1953, Iowa State College.
- ALBERT M. JAQUA (1959).....Assistant Professor of Mathematics
B.A., 1950, Los Angeles State College; M.A., 1954, Ph.D., 1958, University of California at Los Angeles.
- JANET JEFFERS (1955).....Associate Professor of Education
B.A., 1944, M.A., 1947, University of Washington; Ph.D., 1955, Columbia University.
- DAVID O. JENKINS (1959).....Assistant Professor of Accounting
B.B.A., 1952, Loyola University; M.A., 1955, Catholic University of America; Certified Public Accountant, 1958, California.
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A.B., 1945, Nebraska State Teachers College; M.A., 1953, Ph.D., 1959, Northwestern University.

- DICK A. JOHNSON (1956) Assistant Professor of Art
B.A., 1950, M.A., 1955, University of California at Los Angeles.
- DOROTHY JOHNSON (1960) Assistant Professor of Nursing
B.S., 1956, University of California at Berkeley; B.S.N., 1957, Yale University; R.N., 1943, P.H.N., 1949, California.
- EDWIN JOHNSON (1952) Veterans Co-ordinator
B.A., 1950, University of Arizona; M.A., 1952, University of Southern California.
- HAZEL M. JOHNSON (1959) Counselor
A.B., 1940, Whitworth College; M.A., 1953, Stanford University.
- JOAN JOHNSON (1955) Assistant Professor of Physical Education
B.S., 1951, University of Wisconsin; M.S.Ed., 1955, University of Southern California.
- LOIS V. JOHNSON (1950) Associate Professor of Education
B.E., 1938, Northern Illinois State Teachers College; M.A., 1939, Northwestern University; Ed.D., 1948, University of Illinois
- WILLIAM JOHNSON (1959) Assistant Professor of Physical Education
B.S., 1936, M.S., 1942, Ed.D., 1955, University of Oregon.
- STEWART A. JOHNSTON (1953) Professor of Chemistry and Chairman,
Division of Science and Mathematics
B.S., (Hons.) 1932, Teaching Certificate, 1934, M.S., 1937, University of Manitoba; Ph.D., 1940, Stanford University.
- H. MILTON JONES (1959) Assistant Professor of Accounting
B.S., 1954, Berea College; M.B.A., 1958, Indiana University.
- LELAND V. JONES (1957) Assistant Professor of Police Administration
- SAMUEL H. JONES (1956) Associate Professor of History
B.S., 1947, Ph.D., 1953, Ohio State University.
- RICHARD A. KALISH (1959) Assistant Professor of Psychology
B.A., 1951, Antioch College; M.A., 1953, University of Maryland; Ph.D., 1957, Western Reserve University.
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B.A., 1948, B.L.S., 1949, University of California at Berkeley.
- WILLIAM M. KENDRICK (1960) Assistant Professor of Education
B.A., 1957, Western Washington College of Education; M.A., 1960, Los Angeles State College.
- RICHARD T. KEYS (1959) Assistant Professor of Chemistry
A.B., 1953, Harvard University; Ph.D., 1958, Iowa State College.
- DONALD I. KIEL (1960) Assistant Professor of Mathematics
A.B., 1953, Calvin College; M.A., 1956, University of Michigan.
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B.S., 1948, University of Washington; M.S., 1958, University of California at Los Angeles; R.N., 1948, Washington; P.H.N., 1958, California.
- DONALD B. KINTSLER (1957) Associate Professor of Education
A.B., 1938, Lafayette College; M.A., 1954, Los Angeles State College; Ph.D., 1959, University of Southern California.
- DAVID H. KLEIN (1960) Assistant Professor of Chemistry
A.B., 1954, Albion College; Ph.D., 1959, Case Institute of Technology.
- RALPH ERNEST KLOEPPER (1959) Assistant Professor of Education
B.S. in Ed., 1938, Kansas State Teachers College; Ed.D., 1951, University of Southern California.
- DONALD S. KLOPP (1959) Assistant Professor of Education
A.B., 1931, M.A., 1937, Pennsylvania State University; Ed.D., 1952, New York University.
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B.S., 1949, Thiel College; M.A., 1951, Ph.D., 1959, Ohio State University.
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A.B., 1939, University of Washington; M.S., 1945, Juilliard School of Music; Ed.D., 1957, Columbia University Teachers College.
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B.S., 1950, M.Ed., 1954, Ed.D., 1960, University of Pittsburgh.
- DONALD P. KOMMERS (1959) Assistant Professor of Government
B.A., 1954, Catholic University of America; M.A., 1957, Ph.D., 1959, University of Wisconsin.
- EUGENE H. KOPP (1958) Assistant Professor of Engineering
B.E.E., 1950, M.E.E., 1953, City College of New York.

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A.B., 1936, Carthage College; M.A., 1941, University of Iowa; Ph.D., 1957, Eastman School of Music.
- AARON KRIEDEL (1956).....Assistant Professor of Education
B.A., 1947, University of Miami; M.A., 1953, Los Angeles State College.
- RUBEN F. KUGLER (1959).....Social Sciences Librarian
B.A., 1949, University of California at Los Angeles; M.A., 1950, Ph.D., 1953, M.S.L.S., 1959, University of Southern California.
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B.A., 1950, Hastings College; M.A., 1954, University of Oregon; Ph.D., 1956, University of Illinois.
- DAVID LAIRD (1958).....Assistant Professor of English
B.A., 1950, M.A., 1951, Ph.D., 1955, University of Wisconsin.
- A. C. LAMBERT (1950).....Dean of the College
B.S., M.S., 1926, Brigham Young University; Ph.D., 1935, Stanford University.
- JOHN LAMONICA (1956).....Assistant Professor of Industrial Arts
B.A., 1951, University of Southern California; M.A., 1957, Los Angeles State College.
- HERBERT JAY LANDAR (1960).....Assistant Professor of English
B.A., 1949, Queens College; M.A., 1955, Ph.D., 1960, Yale University.
- RODERICK G. LANGSTON (1952).....Professor of Education
B.A., 1938, San Diego State College; Ed.D., 1948, Stanford University.
- MARVIN LASER (1956).....Professor of English and Chairman, Division of Language Arts
Ph.B., 1935, M.A., 1937, University of Chicago; Ph.D., 1949, Northwestern University.
- WILLIAM G. LEARY (1953).....Professor of English
A.B., 1936, M.A., 1938, University of California at Los Angeles; Ph.D., 1953, Stanford University.
- VERNON F. LEIDIG (1950).....Professor of Music
B.A., 1943, University of California at Santa Barbara; M.S. in Ed., 1951, M.M., 1956, University of Southern California.
- JACK G. LEVINE (1960).....Instructor in Engineering
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A.B., 1957, Los Angeles State College.
- ROBERT T. LEWIS (1952).....Associate Professor of Psychology
B.A., 1946, M.A., 1950, University of Southern California; Ph.D., 1952, University of Denver; Certified Psychologist, 1959, California.
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B.A., 1949, Ed.M., 1954, Eastern Washington College.
- DAVID LINDSEY (1956).....Associate Professor of History
B.A., 1936, Cornell University; M.A., 1938, Pennsylvania State University; Ph.D., 1950, University of Chicago.
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B.A., 1950, M.A., 1954, Ph.D., 1960, University of Michigan.
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B.A., 1938, University of Akron; Ph.D., 1955, Northwestern University.
- THEODORE W. LITTLE (1950).....Professor of Art
B.A., 1939, M.A., 1940, Colorado College.
- WILLIAM E. LLOYD (1959).....Publications Manager
B.S., 1932, M.Ed., 1955, University of Virginia.
- EUGENIA C. LODER (1951).....Professor of Education
B.S., 1925, University of Washington; M.A., 1943, Ed.D., 1945, Stanford University.
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B.A., 1951, Los Angeles State College; M.A., 1953, Ph.D., 1955, University of Washington.
- JAMES L. LOPER (1960).....Assistant Professor of Speech and
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B.A., 1953, Arizona State University; M.A., 1957, University of Denver.
- FRANCIS E. LORD (1953).....Professor of Education
A.B., 1926, Eastern Michigan University; M.A., 1928, University of Chicago; Ph.D., 1936, University of Michigan.

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Division of Health and Safety, Physical Education,
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B.S., 1935, Brigham Young University; M.S., 1938, Ed.D., 1951, University of Southern
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- DONALD C. LOWRIE (1956)..... Associate Professor of Zoology
B.Sc., 1932, Ph.D., 1942, University of Chicago.
- KING S. LUK (1960)..... Assistant Professor of Engineering
B.S., 1957, Los Angeles State College; M.S.C.E., 1960, University of Southern California;
Registered Professional Engineer, 1959, California; Registered Structural Engineer, 1961,
California.
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A.B., 1921, A.M., 1923, University of Nebraska; Ph.D., 1925, Columbia University.
- RICHARD K. LYON (1960)..... Assistant Professor of Mathematics
B.S., 1957, New Mexico Institute of Mining and Technology; M.S., 1959, University of
Wisconsin.
- EDMOND MACIAS (1956)..... Comptroller
B.S., 1958, Los Angeles State College.
- MARTIN P. MACK (1959)..... Assistant Professor of Fine Arts
A.B., 1955, Trinity College; M.A., 1957, Ph.D., 1960, Ohio State University.
- GORDON T. MADDUX (1960)..... Assistant Professor of Physical Education
A.B., 1953, Colorado State College; M.A., 1958, San Francisco State College.
- FENG-HWA MAH (1960)..... Assistant Professor of Economics
B.L., 1947, National Peking University; M.A., 1956, Ph.D., 1959, University of Michigan.
- EVELYN J. MALKIN (1957)..... Professor of Nursing
B.S. in P.H.N., 1947, M.S. in N.E., 1950, Catholic University of America; R.N., 1931, New
York, District of Columbia, Mississippi, and California.
- JEAN MALONEY (1960)..... Assistant Professor of English
M.A., 1937, University of Glasgow.
- DONALD KEITH MANION (1950)..... Professor of Art
B.A.E., 1929, John Herron Art School; M.A., 1947, University of Oregon.
- GEORGE E. MANN (1957)..... Associate Professor of Engineering
B.S., 1937, M.S., 1938, California Institute of Technology; Registered Professional Engineer,
1945, California.
- RICHARD L. MANNING (1959)..... Administrative Assistant to the Dean of Student Personnel
A.B., 1958, San Diego State College.
- MORRIS MANO (1960)..... Assistant Professor of Engineering
B.E.E., 1952, New York University; M.S., 1958, Northwestern University.
- FRED H. MARCUS (1955)..... Associate Professor of English
B.A., 1942, Brooklyn College; M.A., 1947, Ph.D., 1952, New York University.
- JOSE MARIN (1960)..... Assistant Professor of Foreign Languages
A.B., 1935, University of Valencia; M.A., 1956, University of Southern California; Ph.D.,
1957, University of Valencia.
- ALVIN MARKS (1958)..... Associate Dean of Student Personnel—Counseling and Testing
B.A., 1956, Los Angeles State College; Ph.D., 1958, University of Southern California; Cer-
tified Psychologist, 1960, California.
- RAY F. MARSH (1955)..... Associate Dean of Student Personnel—Admissions and Records
B.S., 1955, M.B.S., 1958, University of Southern California.
- KENNETH A. MARTYN (1957)..... Dean of Instruction—Curriculum
B.S., 1948, Wayne State University; M.A., 1950, Ed.D., 1957, Stanford University.
- MILDRED G. MASSEY (1960)..... Assistant Professor of Economics
A.B., 1942, University of California at Berkeley; M.A., 1951, Ph.D., 1958, University of
Oregon.
- LEONARD G. MATHY (1950)..... Professor of Economics
B.A., 1941, M.A., 1943, Ph.D., 1946, University of Illinois.
- JANE E. MATSON (1958)..... Assistant Professor of Education
B.A., 1935, University of Chicago; M.A., 1952, Ed.D., 1955, Stanford University.
- DONALD M. MATSUMORI (1959)..... Catalog Librarian
B.B.A., 1955, University of Hawaii; M.S. in L.S., 1960, University of Southern California.
- WILLIAM A. MAYS (1956)..... Associate Professor of Industrial Arts
B.S., 1939, Alabama Polytechnic Institute; M.S., 1950, Oregon State College; Ph.D., 1954,
Ohio State University.

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A.B., 1958, M.S., 1959, San Diego State College.
- THOMAS McENROE (1960).....Assistant Professor of Government
A.B., 1951, M.A., 1952, University of California at Los Angeles; Ph.D., 1960, University of Minnesota.
- DOROTHY C. McKENZIE (1960).....Assistant Professor of English
A.B., 1932, Colorado State College of Education; M.S., 1960, University of Southern California.
- JOHN McLAREN (1958).....Assistant Professor of Accounting
B.B.A., 1953, University of Pittsburgh; M.B.A., 1960, University of California at Los Angeles; Certified Public Accountant, 1957, Pennsylvania.
- SAMUEL T. McSEVENEY (1960).....Assistant Professor of History
A.B., 1951, Brooklyn College; A.M., 1953, University of Connecticut.
- ROBERT F. MEADE (1960).....Assistant Professor of Geology
B.S., 1955, California Institute of Technology.
- J. M. METCALF (1960).....Assistant Professor of Art
A.B., 1939, New Mexico Highlands University; M.A., 1941, Colorado State College; M.Ed., 1960, University of Southern California.
- MILTON W. MEYER (1959).....Assistant Professor of History
B.A., 1947, Yale University; M.I.A., 1949, Columbia University; Ph.D., 1959, Stanford University.
- BERNARD E. MICHALS (1958).....Assistant Professor of Education
A.B., 1948, M.A., 1950, Colorado State College; Ed.D., 1958, Stanford University.
- DAVID L. MILLER (1958).....Co-ordinator of Extension and Special Programs
B.A., 1947, Wesleyan University; M.A., 1948, Mexico City College; Ph.D., 1960, University of Michigan.
- MAXINE L. MILLER (1955).....Assistant Professor of Homes Economics
B.A., 1953, Washington State University; M.A., 1959, University of Washington.
- JOHN K. MINASIAN (1959).....Assistant Professor of Engineering
B.S., 1938, M.S., 1944, California Institute of Technology; Registered Professional Civil Engineer, 1943, California, 1950, Utah; Registered Professional Structural Engineer, 1944, California, 1950, Utah.
- ARTHUR J. MISNER (1955).....Associate Professor of Government
A.B., 1942, M.A., 1948, Ph.D., 1954, University of California at Berkeley
- MARGUERITE MOCHEL (1949).....Associate Professor of Physical Education
B.A., 1940, Hunter College; M.A., 1942, Columbia University; Ph.D., 1949, University of Southern California.
- DONALD ARTHUR MOORE (1956).....Associate Professor of Economics and Statistics
B.A., 1941, Linfield College; M.A., 1942, Tufts College; Ph.D., 1956, Michigan State University.
- RALPH G. MORITZ (1955).....Supervising Catalog Librarian
B.S., 1938, Iowa State Teachers College; B.S. in L.S., 1940, University of Denver.
- ROBERT R. MORMAN (1956).....Associate Professor of Education
B.A., 1947, University of California at Los Angeles; M.A., 1949, Ph.D., 1955, University of Southern California.
- RONALD H. MORRIS (1960).....Assistant Professor of Physical Education
B.S., 1957, M.S., 1958, University of Southern California.
- DONALD G. MORTENSEN (1949).....Professor of Education
B.A., 1937, Brigham Young University; Ed.D., 1950, University of Southern California.
- JOHN A. MORTON (1948).....Dean of Educational Services and Summer Session
B.S., 1936, M.S., 1939, University of Oregon; Ed.D., 1945, Stanford University.
- MARJORIE MOTE (1957).....Associate Professor of Nursing
B.S., 1954, University of Cincinnati; M.S., 1956, University of California at Los Angeles; R.N., 1947, California.
- GEORGE M. MOTHERWELL (1958).....Assistant Professor of English
A.B., 1949, A.M., 1950, Ph.D., 1959, Indiana University.
- HUGH E. MULLINS (1950).....Professor of Music
B.M.Ed., 1945, Milikin Conservatory of Music; Ph.D., 1951, University of Southern California.
- DAVID ALAN MUNRO (1959).....Assistant Professor of English
B.S., 1929, Northwestern University; M.A., 1953, Wayne State University.
- MARY E. MURPHY (1951).....Professor of Accounting
B.S.C., 1927, University of Iowa; M.S., 1928, Columbia University; Ph.D., 1938, London School of Economics; Certified Public Accountant, 1931, New York.

- RICHARD O. NAHRENDORF (1950)..... Professor of Sociology
Certificate in Social Work, 1932, School of Social Work, Leipzig, Germany; B.A., 1944,
Certificate in Social Work, 1945, Ph.D., 1948, University of Southern California.
- EDWARD J. NEALE (1949)..... Associate Professor of Education
A.B., 1940, A.M., 1944, University of Notre Dame; Ph.D., 1949, University of California
at Berkeley.
- EDWARD AXEL NELSON (1959)..... Associate Professor of Finance
B.S., 1948, DePaul University; M.B.A., 1949, University of Chicago; Ph.D., 1956, University
of Missouri.
- JACK L. NELSON (1958)..... Assistant Professor of Education
B.A., 1954, University of Denver; M.A., 1958, Los Angeles State College.
- LESLIE W. NELSON (1950)..... Professor of Education
B.S., 1930, M.S., 1931, Utah State Agricultural College; Ph.D., 1944, Ohio State University.
- WALTER D. NELSON (1959)..... Assistant Professor of History
B.A., 1949, Whitman College; M.A., 1950, Columbia University.
- ROBERT M. NEWCOMB (1958)..... Assistant Professor of Geography
B.A., 1949, Stanford University; M.A., 1951, Ph.D., 1958, University of California at Los
Angeles.
- TED NICHOLS (1960)..... Assistant Professor of Music
B.M., 1951, Baylor University; M.S., 1954, Texas College of Arts and Industries.
- REED E. NILSEN (1955)..... Assistant Professor of Physical Education
B.S., 1943, M.A., 1953, Brigham Young University.
- MIDORI NISHI (1951)..... Assistant Professor of Geography
B.A., 1945, Nebraska Wesleyan University; M.A., 1946, Clark University; Ph.D., 1955,
University of Washington.
- JOHN C. NORBY (1950)..... Professor of Economics
B.A., 1936, Eastern Washington College of Education; B.S., 1939, University of Washington;
M.A., 1948, Ph.D., 1953, University of Minnesota.
- DAVID D. NORRIS (1960)..... Instructor in Physics
B.S., 1960, Los Angeles State College.
- MARCELLA OBERLE (1960)..... Assistant Professor of Speech
B.E., 1942, Northern Illinois University; M.A., 1948, Northwestern University.
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B.S., 1927, University of Washington; M.Ed., 1941, Montana State University.
- ROBERT RHEA ODOM (1960)..... Assistant Professor of Education
B.S.B.A., 1953, Northwestern University; M.Ed., 1955, Boston State Teachers College; Ed.D.,
1960, University of California at Los Angeles.
- MARION J. OLSEN (1958)..... Assistant Professor of Recreation Education
B.S., 1936, M.S., 1941, Brigham Young University.
- THOMAS P. ONAK (1959)..... Assistant Professor of Chemistry
A.B., 1954, San Diego State College; Ph.D., 1958, University of California at Berkeley.
- JULIA ORY (1961)..... Assistant Professor of Nursing
B.S., 1953, Baylor University; M.S., 1957, University of Texas; R.N., 1954, Texas, 1960,
California.
- BARBARA M. OSBORN (1956)..... Assistant Professor of Health and Safety Education
B.S., 1943, University of California at Berkeley; M.A., 1956, Los Angeles State College; R.N.,
1943, California; Ed.D., 1960, University of California at Los Angeles.
- SELMER OSTLIE (1958)..... Professor of Education
B.A., 1927, St. Olaf College; B.M., 1935 Illinois Wesleyan University; M.S., 1939, Ed.D.,
1950, University of Southern California.
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A.B., 1952, M.A., 1954, Los Angeles State College.
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B.S., 1953, M.S., 1954, University of California at Los Angeles.
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B.A., 1942, M.A., 1944, University of California at Los Angeles; Ph.D., 1948, Indiana Uni-
versity.
- RICHARD N. OWENS (1960)..... Professor of Accounting
A.B., B.S., 1917, University of Missouri; M.B.A., 1922, Ph.D., 1928, University of Chicago;
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A.B., 1952, M.A., 1956, University of California at Los Angeles.

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B.Ed., 1942, University of California at Berkeley; M.Ed., 1951, University of California at Los Angeles.
- LEON PAPE (1961).....Assistant Professor of Physics
B.A., 1949, Brooklyn College; M.S., 1953, University of Southern California.
- VICTOR PAYSE, JR. (1959).....Assistant Professor of Engineering
B.S., 1948, University of California at Berkeley; M.Eng., 1959, University of California at Los Angeles; Registered Professional Engineer, 1951, California.
- MARY ALICE PEAIRS (1952).....Curriculum Librarian
B.E., 1939, National College of Education; B.S.L.S., 1942, George Peabody College for Teachers.
- DOROTHY R. PECKHAM (1950).....Professor of Education
B.A., 1932, M.A., 1933, Ed.D., 1948, University of Texas.
- MARY PELTZ (1958).....Social Sciences Librarian
B.A., 1957, M.S.L.S., 1958, University of Southern California.
- ESTHER PENCHEF (1948).....Associate Professor of Sociology
B.S., 1935, Bowling Green State University; M.A., 1940, University of Toledo; Ph.D., 1947, University of Southern California; L.L.B., 1957, Southwestern University; admitted to California State Bar, 1960.
- JOSEPH GERARD PHELAN (1959).....Assistant Professor of Psychology
B.A., 1936, M.A., 1938, Fordham University; M.A., 1948, Ph.D., 1951, Princeton University; Certified Psychologist, 1959, California.
- RAYMOND J. PITTS (1956).....Associate Professor of Education
A.B., 1932, Talladega College; A.M., 1938, Ph.D., 1956, University of Michigan.
- WILLIAM G. PLUMTREE (1955).....Associate Professor of Engineering
B.S. in C.E., 1939, Wayne State University; M.C.E., 1950, New York University; M.S. in App. Mech., 1955, Polytechnic Institute of Brooklyn; Registered Professional Civil Engineer, 1954, New York, 1956, California; Registered Structural Engineer, 1961, California.
- MORRIS POLAN (1955).....Chief, Library Reader Services
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B.A., 1947, M.A., 1951, Ph.D., 1954, University of Minnesota.
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B.E., 1940, University of California at Los Angeles; M.E., 1952, Ed.D., 1958, Wayne State University.
- SUZANNE M. POWELL (1960).....Assistant Professor of Physical Education
B.S., 1955, Wayne State University; M.A., 1960, University of Southern California.
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B.A., 1947, M.A., 1949, Ph.D., 1954, University of California at Los Angeles.
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B.S. in Ed., 1935, Framingham Teachers College; M.Ed., 1949, Boston University; Ed.D., 1956, University of California at Los Angeles.
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B.A., 1932, San Jose State College; M.S., 1933, University of Idaho; Ed.D., 1950, University of Southern California.
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B.S., 1937, M.S., 1939, University of California at Berkeley; Registered Professional Engineer, 1959, California.
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Ph.B., 1951, M.A., 1952, Marquette University; Ph.D., 1956, University of Wisconsin.
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B.S.B.A., 1951, M.B.A., 1957, University of Tulsa; Certified Public Accountant, 1955, Oklahoma.
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B.S., 1948, Ohio State University; M.S., 1953, Indiana University.

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B.A., 1940, Hastings College; M.S. in Ed., 1948, Ph.D., 1951, University of Southern California.
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B.S., 1955, M.S., 1957, University of California at Los Angeles; Registered Professional Mechanical Engineer, 1958, California.
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B.A., 1953, M.A. (Hons.), 1954, University of New Zealand.
- ROBERT F. RISSE (1957).....Assistant Professor of Engineering
B.S., 1923, Case School of Applied Science; Registered Professional Mechanical Engineer, 1937, Ohio.
- ALYCE S. ROBINSON (1958).....Education Librarian
B.S., 1947, Geneseo State Teachers College; M.S.L.S., 1959, University of Southern California.
- GERTRUDE A. ROBINSON (1959).....Assistant Professor of Education
B.S. in Ed., 1933, M.A., 1951, Ohio State University; Ed.D., 1956, New York University.
- JANE J. ROBINSON (1960).....Assistant Professor of English
A.B., 1938, M.A., 1941, Ph.D., 1946, University of California at Los Angeles.
- GEORGE M. ROLLING (1959).....Catalog Librarian
A.B., 1948, Occidental College; M.S.L.S., 1955, University of Southern California.
- ROLAND CASE ROSS (1950).....Professor of Nature Study
B.A., 1931, University of California at Los Angeles; M.S., 1932, California Institute of Technology.
- JULIAN B. ROTH (1956).....Associate Professor of Education
A.B., 1941, Reed College; M.A., 1950, San Francisco State College; Ed.D., 1954, Stanford University.
- PAUL K. ROWAN (1956).....Assistant Professor of Sociology
B.A., 1949, M.A., 1950, University of California at Berkeley.
- HUDSON ROYSHER (1954).....Professor of Art
B.S., 1934, Western Reserve University; M.F.A., 1938, University of Southern California.
- ROBERT W. RUNGE (1958).....Assistant Professor of Music
B.A., 1947, University of California at Santa Barbara; M.S., 1960, University of Southern California.
- THOMAS A. RUSCH (1959).....Assistant Professor of Government
B.S., 1941, University of Wisconsin; M.A. 1948, University of California at Los Angeles; Ph.D., 1955, University of Chicago.
- JOSEPH A. SACHER (1955).....Associate Professor of Botany
B.S., 1941, New York State College of Forestry; Ph.D., 1953, University of California at Berkeley.
- EMANUEL C. SALEMI (1960).....Assistant Professor of Management
B.S., 1951, University of Buffalo; M.B.A., 1952, Ph.D., 1958, University of Wisconsin.
- JOHN SALMOND, JR. (1951).....Assistant Dean of Instruction
A.B., 1949, University of Southern California.
- RUTH DAWSON SAMSON (1954).....Associate Professor of Education
A.B., 1921, Oberlin College; M.A., 1926, University of Akron; Ed.D., 1955, University of Southern California.
- CLARENCE K. SANDELIN (1949).....Associate Professor of English
B.A., 1939, M.A., 1942, University of Iowa; Ph.D., 1956, University of Wisconsin.
- AKE SANDLER (1949).....Professor of Government
B.A., 1944, M.A., 1946, University of Southern California; Ph.D., 1950, University of California at Los Angeles.

- RUDOLPH SANDO (1952).....Professor of Education and Chairman, Division of Education
B.A., 1930, Luther College; M.E., 1939, University of Montana; Ed.D., 1952, University of California at Berkeley.
- EDWARD McANENEY SAYLES (1959).....Assistant Professor of Philosophy
B.A., 1948, Ph.D., 1956, University of California at Los Angeles.
- DORA SCHEFFSKEY (1953).....Assistant Professor of Education
B.S., 1927, Northwest Missouri State Teachers College; M.A., 1936, University of Missouri.
- PATTY W. SCHLIESTETT (1956).....Assistant Professor of Music
B.S., 1947, Westchester State Teachers College; M.A., 1950, Occidental College.
- JOSEPH A. SCHMIDT (1954).....Chief, Library Special Services
B.A., 1950, M.A., 1951, Washington State University; M.S.L.S., 1954, University of Southern California.
- LEONARD I. SCHNEIDER (1958).....Associate Professor of Psychology
B.A., 1943, M.A., 1949, State University of Iowa; Ph.D., 1953, University of Colorado; Certified Psychologist, 1956, California.
- BEVERLY JEANNE SCHNITZLER (1959).....Assistant Professor of Fine Arts
B.S., 1954, University of Arizona; M.A., 1959, Los Angeles State College.
- DELWYN G. SCHUBERT (1950).....Associate Professor of Education
B.S., 1942, Oshkosh State Teachers College; M.S., 1947, University of Wisconsin; Ph.D., 1949, Northwestern University.
- INEZ R. SCHUBERT (1955).....Assistant Professor of Music
A.B., 1950, University of Southern California.
- HOWARD L. SCHUG (1958).....Assistant Professor of Engineering
B.S. in E.E., 1922, Lafayette College.
- LEON SCHWARTZ (1959).....Assistant Professor of Foreign Languages
A.B., 1948, University of California at Los Angeles; M.A., 1950, University of Southern California.
- DONALD SCOLES (1959).....Associate Professor of Finance and Insurance
B.S., 1916, Northwestern University; A.M., 1942, Ph.D., 1954, University of Pennsylvania.
- LOUISE SCOTT (1956).....Associate Professor of Speech
B.L.I., 1933, Emerson College; Ed.M., 1939, Boston University.
- PAUL T. SCOTT (1950).....Professor of Journalism
B.A., 1930, Indiana University; M.A., 1938, University of Iowa.
- RICHARD E. SERVEY (1960).....Assistant Professor of Education
A.B., 1948, M.A., 1955, University of California at Los Angeles; Ph.D., 1959, University of Southern California.
- RANDOLPH G. SERVICE (1957).....Assistant Professor of Education
B.A., 1941, M.Ed., 1952, University of California at Los Angeles.
- JOSEPH T. SETO (1960).....Assistant Professor of Microbiology
B.S., 1949, University of Minnesota; M.S., 1955, Ph.D., 1957, University of Wisconsin.
- GORDON B. SEVERANCE (1956).....Associate Professor of Business Law
A.B., 1943, M.A., 1945, Stanford University; Ph.D., 1949, LL.B., 1946, University of Southern California; admitted to the California State Bar, 1947.
- JAMES SHARP (1958).....Building Assistant
B.A., 1958, Los Angeles State College.
- CHING LAI SHENG (1960).....Associate Professor of Engineering
B.S., 1941, National Chiao Tung University; Ph.D., 1948, Edinburgh University.
- GERALD Q. SHEPHERD (1951).....Professor of Education
B.A., 1926, Simpson College; M.S., 1933, Iowa State College; Ed.D., 1953, University of Southern California.
- FREDERICK B. SHROYER (1950).....Professor of English
B.A., 1948, M.A., 1949, Ph.D., 1954, University of Southern California.
- GUNJIT S. SIKAND (1958).....Assistant Professor of Engineering
B.S., 1947, University of Punjab; B.C.E., 1950, Alabama Polytechnic Institute; M.S., 1953, University of Colorado; Registered Professional Engineer, 1954, California.
- PHILIP SILVER (1958).....Assistant Professor of Engineering
B.S.C.E., 1949, Worcester Polytechnic Institute; M.S., 1956, University of Southern California.
- RONALD H. SILVERMAN (1955).....Associate Professor of Art
B.A., 1952, University of California at Los Angeles; M.A., 1955, Los Angeles State College.
- HYMAN SIMMONDS (1950).....Health Officer
M.D., 1926, University of London.

- FLOYD R. SIMPSON (1949)..... Professor of Business Administration and Economics and
Chairman, Division of Business and Economics
B.A., 1933, M.A., 1938, Ph.D., 1943, University of Minnesota.
- WILLIAM B. SIMPSON (1958)..... Assistant Professor of Economics
B.A., 1942, Reed College; M.A., 1943, Columbia University.
- KATHERINE SISTROM (1956)..... Assistant Professor of Education
B.S., 1932, University of California at Los Angeles; M.S. in Ed., 1955, University of Southern
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- CAROL J. SMALLENBURG (1950)..... Associate Professor of Education
B.A., 1935, Ed.D., 1948, Stanford University.
- B. HUNTER SMEATON (1960)..... Assistant Professor of English and Foreign Languages
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versity.
- ARTHUR LEE SMITH, JR. (1957)..... Assistant Professor of History
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B.A., 1938, University of California at Santa Barbara; M.A., 1955, Claremont Graduate School.
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- MARJORIE M. SMITH (1959)..... Assistant Professor of Drama
A.O.C.A., 1939, Ontario College of Art; B.S., 1949, M.A., 1950, University of Illinois;
Ph.D., 1959, University of Michigan.
- KEITH D. SNYDER (1953)..... Professor of Music
B.M.Ed., 1931, Nebraska Wesleyan University; M.Mus., 1937, Syracuse University; Ed.D.,
1953, Columbia University Teachers College.
- SIDNEY SOCLOF (1960)..... Instructor in Engineering
B.E.E., 1958, University of Florida; M.S.E., 1959, University of Michigan.
- DOROTHY PETTY SOEBERG (1957)..... Assistant Professor of Education
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- BERNARD J. SOMERS (1960)..... Assistant Professor of Education
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Psychologist, 1959, New York, 1960, California.
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B.S. in Ed., 1922, M.A., 1924, University of Oregon; Ph.D., 1929, Stanford University; Pro-
fessor Emeritus, Claremont Graduate School, 1958.
- FLORENCE BOYD SPERRY (1956)..... Assistant Professor of Education
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- RICHARD BLYTHE SPROTT (1959)..... Instructor in Psychology
B.A., 1955, Fresno State College; M.A., 1959, Claremont College.
- PATRICIA STAFFORD (1957)..... Assistant Professor of Education
B.A., 1943, Ottawa University; M.A., 1948, Columbia University; M.A., 1952, University of
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- FRIEDA A. STAHL (1959)..... Assistant Professor of Physics
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- JAMES J. STANSELL (1951)..... Professor of Speech
B.A., 1937, M.A., 1938, University of Oklahoma; Ph.D., 1951, Louisiana State University.
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B.A., 1951, M.A., 1957, Wayne State University.
- KENT L. STECKMESSER (1960)..... Assistant Professor of History
B.A., 1954, Stanford University; M.A., 1956, University of Iowa; Ph.D., 1960, University of
Chicago.
- MILTON STERN (1960)..... Assistant Professor of Music
B.M., 1950, Oberlin College; M.A., 1951, Ed.D., 1955, Columbia University.

- CECIL C. STEWART (1950)..... Professor of Education
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- EUGENE H. STIVERS (1957)..... Assistant Professor of Education
B.A., 1943, Pepperdine College; M.S., 1948, University of Southern California; Ph.D., 1958, University of Chicago.
- HAROLD STORCH (1955)..... Associate Professor of Engineering
B.E.E., 1944, City College of New York, School of Technology; M.S., 1949, Stevens Institute of Technology; Registered Professional Electrical Engineer, 1949, New York, 1955, California.
- MARTIN L. STOUT (1960)..... Assistant Professor of Geology
B.A., 1955, Occidental College; M.S., 1957, Ph.D., 1959, University of Washington.
- RICHARD M. STRAW (1956)..... Associate Professor of Biology
B.A., 1949, University of Minnesota; Ph.D., 1955, Claremont Graduate School.
- DOUGLAS M. STREHLE (1960)..... Assistant Professor of Physical Education
B.A., 1946, Pomona College; M.S., 1953, University of California at Los Angeles.
- KENNETH S. STROBEL (1955)..... Assistant Professor of Education
B.S., 1932, St. Lawrence University.
- FRIEDA J. STROBERG (1957)..... Assistant Professor of Business Education
and Office Administration
B.Ed., 1934, Illinois State Normal University; M.A., 1960, Los Angeles State College.
- HAROLD K. STROM (1960)..... Assistant Professor of Marketing
B.A., 1957, M.B.A., 1958, University of Washington.
- JOSEPH STUBBINS (1959)..... Associate Professor of Education
B.A., 1945, University of Toronto; M.A., 1946, Ph.D., 1949, Columbia University.
- VITO G. SUSCA (1956)..... Associate Professor of Music
B. of M., 1948, University of Michigan; M.M., 1956, University of Southern California.
- KENNETH N. SWEETNAM (1957)..... Associate Professor of Industrial Arts
B.A., 1951, University of California at Santa Barbara; M.A., 1957, Los Angeles State College.
- IRWIN SWERDLOW (1959)..... Assistant Professor of English
A.B., 1935, New York University; M.A., 1938, Columbia University; M.A., 1946, Ph.D., 1951, Harvard University.
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B.S., 1948, Tulane University; M.A., 1952, University of Southern California
- MARTIN I. TAFT (1960)..... Assistant Professor of Engineering
B.A., 1952, Brooklyn College; B.M.E., 1956, Polytechnic Institute of Brooklyn; M.S.M.E., 1960, University of Southern California.
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B.A., 1950, M.A., 1952, University of California at Los Angeles.
- ELIZABETH TAMBLYN (1955)..... Assistant Professor of Microbiology
B.S., 1948, Kansas State College; M.S., 1950, University of Southern California.
- NORWOOD TEAGUE (1958)..... Associate Professor of Industrial Arts
B.S. in Ed., 1940, North Carolina State College; B.S. in Ind. Design, 1946, University of Southern California.
- TERANCE C. TERMAN (1961)..... Assistant Professor of Physics
B.S., 1952, Stanford University; M.S., 1955, California Institute of Technology.
- KENNETH R. THOMAS (1958)..... Assistant Professor of Industrial Arts
A.B., 1953, San Jose State College; M.A., 1956, San Diego State College.
- ROBERT E. THOMASON (1957)..... Chief, Library Services
B.A., 1931, Pomona College; Graduate Certificate in Librarianship, 1939, University of California at Berkeley.
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A.B., 1948, Oberlin College; M.A., 1949, Yale University; Ph.D., 1960, Columbia University.
- ALICE C. THOMPSON (1952)..... Associate Professor of Psychology
A.B., 1932, Northwestern Nazarene College; M.A., 1939, University of California at Los Angeles; Ph.D., 1959, Sorbonne, University of Paris; Certified Psychologist, 1958, California.
- ROSS D. F. THOMPSON (1959)..... Associate Professor of Physics
B.S., 1940, California Institute of Technology; Ph.D., 1950, Cornell University.
- ALBERT A. TILLMAN (1956)..... Assistant Professor of Recreation Education
A.B., 1950, University of Southern California; M.S., 1956, Los Angeles State College.
- MAURINE TIMMERMAN (1950)..... Professor of Music
B.S., 1934, University of Minnesota; M.S., 1941, University of Idaho; Ed.D., 1960, University of Southern California.

- IRIS MARIE TIMSON (1956).....Associate Professor of Education
B.F.A. in Ed., 1935, Nebraska State Teachers College; M.Ed., 1951, University of California at Los Angeles; Ed.D., 1957, Stanford University.
- JOHN O. TIPPLE (1956).....Associate Professor of History
B.A., 1951, University of Colorado; M.A., 1952, Ph.D., 1958, Stanford University.
- GENE B. TIPTON (1957).....Associate Professor of Economics
B.A., 1944, M.A., 1947, Ph.D., 1953, University of California at Los Angeles.
- ALEX RICHARD TOLMAN (1960).....Assistant Professor of Speech
B.A., 1951, Southern Idaho College of Education; M.A., 1956, San Jose State College.
- DOUGLAS W. TOMS (1960).....Assistant Professor of Health and Safety Education
B.S., 1957, Central Michigan University; M.A., 1958, Michigan State University.
- FRED M. TONGE (1949).....Professor of Education
B.A., 1928, San Jose State College; M.A., 1929, Ed.D., 1945, Stanford University.
- ROY B. TOZIER (1952).....Professor of Education
B.A., 1919, Park College; M.A., 1926, University of Illinois; Ph.D., 1932, State University of Iowa.
- EVELYN TROUP (1953).....Professor of Psychology
B.A., 1928, M.A., 1930, University of Buffalo; Ph.D., 1938, Columbia University; Diplomate American Board of Examiners in Psychology, 1948; Certified Psychologist, 1959, California.
- ALVIN E. TUOHINO (1956).....Associate Professor of Accounting
B.A., 1935, Augustana College; M.S., 1940, University of Denver; Certified Public Accountant, 1951, Kansas, 1953, California.
- MARIS U. UBANS (1959).....Assistant Professor of Drama
B.S., 1954, Syracuse University; M.A., 1955, Northwestern University.
- JOSEPH G. URIBE (1960).....Assistant Professor of Art
A.B., 1954, University of California at Los Angeles; M.A., 1959, Los Angeles State College.
- VELMA J. VANCE (1959).....Assistant Professor of Zoology
B.S., 1951, College of Idaho; M.S., 1953, University of Arizona; Ph.D., 1959, University of California at Los Angeles.
- MARYO VANDEMAN (1960).....Assistant Professor of Music
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- BETHUMNE VANDERBURG (1959).....Assistant Professor of Mathematics
B.S., 1935, University of Alberta; M.A., 1939, University of Toronto; Ph.D., 1949, University of Chicago.
- GLENN VANIMAN (1961).....Assistant in Chemistry
B.A., 1960, Los Angeles State College.
- LLOYD S. VANWINKLE (1951).....Associate Professor of Education
B.Ed., 1933, Eastern Illinois State College; A.M., 1941, University of Illinois; Ed.D., 1949, Colorado State College of Education.
- SIMONE J. VITALE (1959).....Assistant Catalog Librarian
L.Th., 1931, Theological University of Pius XI, Italy; M.S.L.S., 1960, University of Southern California.
- C. WILLIAM VORIS (1953).....Professor of Management
B.S., 1947, M.B.A., 1948, University of Southern California; Ph.D., 1951, Ohio State University.
- MARIAN E. WAGSTAFF (1952).....Professor of Education
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- KARL M. WALLACE (1948).....Associate Professor of Sociology
B.S., 1942, M.S., 1945, Brigham Young University; Ph.D., 1947, University of Southern California.
- EDWIN WANDT (1954).....Associate Professor of Education
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- CHARLES K. A. WANG (1954).....Associate Professor of Psychology
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- BERNARD E. WARNER (1952).....Associate Professor of Health and Safety Education
B.S. in Ed., 1936, Bowling Green State University; M.A., 1942, Ohio State University; Ed.D., 1954, University of Southern California.
- TULLY E. WARREN (1950).....Associate Professor of Government
B.A., 1938, M.A., 1939, Ph.D., 1950, Stanford University.
- JOHN C. WECKER (1956).....Supervising Education Librarian
A.B., 1947, M.A., 1948, M.S.L.S., 1951, University of Southern California.

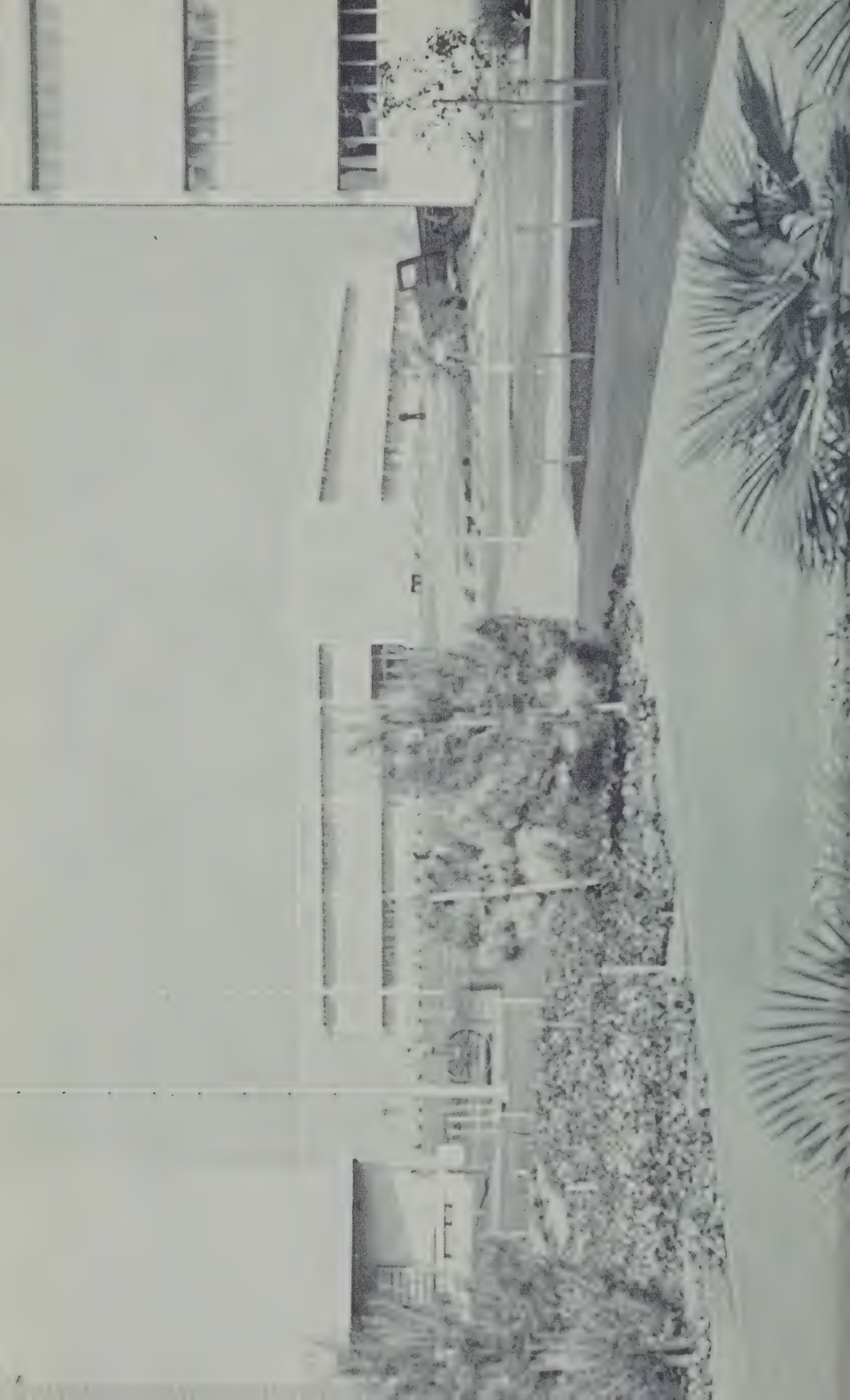


ADMINISTRATION

1957







- JAMES P. WELSH (1953).....Associate Professor of Zoology
B.A., 1947, Ph.D., 1952, Stanford University.
- BETTY JANE WENDTLAND (1960).....Assistant Professor of Nursing
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- WILLIAM E. R. WHITELEY (1958).....Associate Professor of Health and Safety Education
B.S. in Ed., 1950, Ohio Northern University; M.S. in Ed., 1951, Florida State University; H.S.D., 1957, Indiana University.
- RICHARD J. WHITING (1956).....Assistant Professor of Management
B.S. in E.E., 1946, B.S. in I.E., 1947, University of Washington; M.B.A., 1949, Stanford University.
- HOWARD E. WILKENING (1948).....Professor of Psychology
B.S., 1933, New York University; M.A., 1939, University of Colorado; Ph.D., 1941, New York University.
- FRANK W. WILLIAMS (1956).....Assistant Professor of Art
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- JOHN B. WILLIAMS (1959).....Assistant Professor of Police Administration
B.S., 1957, M.S., 1959, University of Southern California.
- WIRT A. WILLIAMS, JR. (1953).....Professor of English
B.S., 1940, Delta State College; M.A., 1941, Louisiana State University; Ph.D., 1953, State University of Iowa.
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- ELEANORE C. WILSON (1956).....Assistant Professor of Education
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- JAMES BRIGHT WILSON (1948).....Professor of Philosophy
B.A., 1936, Maryville College; B.D., 1939, Garrett Biblical Institute; M.A., 1942, Ph.D., 1944, University of Southern California.
- FRANCES E. WIRTH (1957).....Assistant Professor of Art
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B.E., 1939, University of California at Los Angeles
- ROLLIN G. WRIGHT (1960).....Assistant Professor of Physical Education
B.A., 1951, M.A., 1955, Los Angeles State College
- EMIL WROBLICKY (1956).....Assistant Professor of Physical Education
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- PAUL M. ZALL (1957).....Associate Professor of English
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- GABRIEL A. ZIMMERMAN (1955).....Associate Professor of Philosophy
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- WAYNE S. ZIMMERMAN (1961).....Test Officer
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- HELEN ZIMNAVODA (1958).....Assistant Professor of Foreign Languages
B.S., 1930, University of Chicago; M.S., 1938, University of Southern California.

EMERITUS

GEORGE DUNCAN (1950-1955)	Associate Professor of Engineering
LOUIS F. FOLEY (1954-1957)	Associate Professor of Education
ELLIOTT W. GUILD (1949-1961)	Professor of Government
LORENTZ I. HANSEN (1950-1959)	Associate Professor of History
CHESTER R. MILHAM (1948-1954)	Vice President
G. MILLAGE MONTGOMERY (1955-1956)	Associate Professor of Education
CLAUDE E. NIHART (1954-1956)	Professor of Industrial Arts
OSCAR SCHWEIRING (1956-1958)	Professor of Education

PART TIME FACULTY

Anna Acke—A.B.	Principal, Los Angeles City Schools
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Aurelio Alves—M.Ed.	Doctoral Candidate, University of Southern California
Anthony J. Andres—B.E.E.E.	Training Engineer, Autonetics Division of North American Aviation, Inc.
Victor Ardon—M.B.A.	Regional Director, Management Engineering Department, International Ladies Garment Workers Union
Byron D. Arnold—Ph.D.	Manager, San Gabriel Symphony Orchestra
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Ferdinand A. Bahr—M.S.	Recreation Specialist, California State Division of Recreation
Ralph A. Barmore—M.Ed.	Instructor, Pasadena City College
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Donald D. Clayton—M.A.	Graduate Research Assistant, California Institute of Technology
Lester Cohn—M.D.	Orthopedist
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Harry L. Cook—A.B.	Instructor, Whittier College
Rupert M. Craig—Ph.D.	Finance Consultant
James W. Creson—M.A.	Research Engineer, Jet Propulsion Laboratory, California Institute of Technology
Edward M. Davis—B.S.	Captain, Los Angeles Police Department
Bruce M. Deatherage—Ph.D.	Research Associate, Deafness Research Laboratory, Children's Hospital
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Thomas C. Dyer—M.A.	Principal, Los Angeles City Schools
Louis W. Eggers, Jr.—M.S.	Project Engineer, Endevco Corporation
John E. Elliott—Ph.D.	Assistant Professor, University of Southern California
Per Engen—M.D.	Physician
Elmer Enszt—Ed.D.	Assistant Superintendent, Alhambra City Schools
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Dr. John Merkley, Supervisor, Youth Services Section, Los Angeles City Schools.
Mr. Henry W. Waltz, Executive Secretary, Metropolitan Recreation and Youth Services Council.

GENERAL INFORMATION

Los Angeles State College is one of the fifteen California state colleges supported by public funds. These colleges are administered by the Trustees of the State College System of California, a board created by Chapter 49, Statutes of 1960. This new governing board was created as the result of studies conducted over several years concerning the future of higher education in California.

A separate governing board for the colleges was recommended in the Master Plan for Higher Education in California which was presented to the Legislature in February 1960. The year 1961-62 is a year of transition as it is the first year of operations under this new governing board.

The Los Angeles State College was created by an act of the Legislature in 1947. Legislative action in 1949 reconstituted the college as the Los Angeles State College of Applied Arts and Sciences.

AIMS AND FUNCTIONS

The primary functions of the college include the preparation of teachers, the training of students in the applied arts and sciences to serve business and industry, the offering of a general and liberal education for responsible citizenship, and the preparation of students for advanced professional study.

ACCREDITATION

Los Angeles State College of Applied Arts and Sciences is accredited by the Western College Association, the California State Board of Education, the American Association of Collegiate Schools of Business, and the National Council for Accreditation of Teacher Education. The accreditation by the National Council for Accreditation of Teacher Education is for the preparation of elementary and secondary teachers and school service personnel (elementary and secondary principals and guidance counselors) with the master's degree as the highest degree approved.

EXTENDED DAY PROGRAM

The Extended Day Program is a continuation of the resident day program into the late afternoon, evening, and Saturday morning hours. It provides an opportunity for matriculated upper-division and graduate students to achieve degree and credential objectives at hours more compatible with their employment schedules and family obligations.

In some areas the graduation requirements may be completed by courses offered in the Extended Day Program. However, certain courses required for teaching credentials and some degree programs are offered

only in the day. Students who plan to complete degree or credential requirements exclusively in the Extended Day Program, therefore, should plan their programs in consultation with an adviser in their major field.

SUMMER SESSION

The college offers a six- and four-week summer session. The six-week session begins approximately one week after the close of the spring semester. The four-week post session begins the following Monday after the close of the six-week session. Work may be taken toward the bachelor of arts, bachelor of science, master of arts, or master of science degrees, and all teaching credentials. Day and evening classes are scheduled. It is not necessary to file an application for admission to the summer session unless the student is working toward a degree or credential. (See Summer Session Schedule for application deadline.)

Many special features are included in the summer session that are not scheduled during the regular school year. These include workshops and seminars for teachers and for other occupational groups. An extensive program of recreational activities is arranged for summer session students. For details, write to the Dean of Summer Session, Los Angeles State College, 5151 State College Dr., Los Angeles 32, California.

EXTENSION SERVICE

The extension service is that part of the instructional program which provides off-campus classes in response to the expressed needs of organizations and groups within Los Angeles and nearby counties. The extension service also administers those courses given for extension credit via open-circuit television. The aim of the extension service is to meet more adequately the needs of the community by providing opportunities for the professional, cultural, and vocational betterment of individuals who cannot take college work in residence.

Extension courses are planned for those wishing to earn college credit and may, under certain conditions, be applied toward a degree or credential. They are open to non-matriculated students but not to students under disqualification. Standard courses may be modified or special courses may be designed to meet the specific needs of the group. Courses may be started at any time and usually meet once a week for 15 weeks. A minimum of 20 students is required to establish an extension course.

Persons desiring detailed information regarding the organization of an extension course or current extension offerings should address inquiries to the Coordinator of Extension and Special Programs, in the Office of the Dean of Educational Services, Los Angeles State College, 5151 State College Drive, Los Angeles 32, California.

NONCREDIT COURSES OR CONFERENCES

Los Angeles State College has a specific mandate to work closely with community, business, and labor organizations in meeting the educational needs of the metropolitan area. This responsibility is met in part through presentation of noncredit institutes, conferences, and courses. Such programs are generally set up in response to specific requests by organizations such as central labor councils, chambers of commerce, business or professional associations or large industrial firms. In some cases noncredit programs are offered to the public by the college without such a request, when a serious need has been found to exist.

All noncredit programs must be of collegiate level, and urgency of the need, existence of other means of meeting it, and the appropriateness of Los Angeles State College as the sponsoring institution are considered in deciding whether a program should be offered. Requests for information or help with particular educational problems which might be met through noncredit programs should be made to the Co-ordinator of Extension and Special Programs, in the Office of the Dean of Educational Services.

WORK-STUDY PROGRAM

Work-Study is a co-operative education program designed to integrate the student's classroom studies with related on-the-job experiences.

To qualify for work-study credit, the student is required to maintain a "C" average, or better; he must be matriculated and taking at least six units of course work, exclusive of work-study; and he must be properly enrolled in the work-study course, *Work-Study Assignments and Reports*. In addition, the student's employment must be approved by a Work-Study Counselor and the Work-Study Co-ordinator.

The credit allowed for work-study is on the basis of one unit for each eight hours of work per week with a maximum of two units of credit each semester. The upper division and lower division maximum is eight units each with a total of 16 units acceptable in the undergraduate program. The work-study units count as elective units in the student's major field. The student should check with his department or his adviser to determine how many units are applicable in his program.

In addition to the on-the-job training, the student is required to have periodic conferences with his Work-Study Counselor and he is required to prepare periodic reports relative to his work experiences.

INTERNSHIPS IN PUBLIC SERVICE

This program of co-operative education combines classroom instruction with practical experience in government agencies and quasi-public enterprises. The regulations governing the operation of this program are similar to those of the work-study program, with the following variations:

1. Applicants for participation must be in senior standing.
2. Maximum number of units that may be earned and applied toward the bachelor's degree prior to registration in the college is eight.

3. In some instances a student must pass a qualifying civil service examination for admission to the internship.
4. Interested students should discuss opportunity and qualification details with the Co-ordinator of Training for Government Service.

ASSOCIATED CLINICS

The Associated Clinics of the college are designed as the center for the supervised clinical practice required for special education teaching credentials. The clinics are well equipped for practice in diagnostic and remedial services in speech, hearing, and reading.

STUDENT PERSONNEL SERVICES

The student personnel services of Los Angeles State College are centered in the Office of Admissions and Records, the Counseling and Testing Center, the Student Activities Office, the Placement Office, the Health Center, the Office of Veterans' Affairs, and the Office of Foreign Student Affairs. The student personnel program is under the general direction of the Dean of Student Personnel.

COUNSELING AND TESTING

Personal Counseling

The services of a professionally trained staff are available to any student who wishes help with educational, vocational, or personal problems.

Testing

The college provides facilities for administering standardized tests under the direction of the Test Officer.

Entrance tests are required of all new, matriculated students, all educational credential candidates, and all candidates for a master's degree.

Study habits inventories, scholastic aptitude and achievement tests, vocational interest inventories, and temperament tests are available to any student, with interpretation given by members of the counseling staff.

Foreign Student Affairs

A foreign students' adviser is available in the Counseling Center to assist foreign students who are in this country for the primary purpose of study. Their status as students is complicated by certain conditions established by federal law, by certain specific regulations and requirements of the college, and by certain provisos laid down by their particular governments. The student must comply with the various regulations to continue his studies in this country.

Veterans

The Los Angeles State College of Applied Arts and Sciences is approved for the training of veterans under Public Laws 190, 550, 610, 634, 894, and the California State Bill for Educational Assistance.

The Office of Veterans Affairs, located in Administration Building, Room 106, will assist veterans in filling out the correct forms for the Federal and State Assistance Programs and in supplying information concerning Veterans Administration regulations and procedures.

Veterans who have had no prior training under the G. I. Bill are urged to request their letters of eligibility by submitting VA Form VB7-1990 at least two months before enrolling. Those who are transferring from another school should submit their transfer requests, VA Form 22-1995 at least one month before enrolling.

The minimum unit loads for subsistence on Public Law 550 are 14 units for full time, 10 units for $\frac{3}{4}$ time and 7 units for half time. These minimums apply to both graduate and undergraduate students, except that graduate students enrolled in research projects (500 level courses) will be allowed $1\frac{1}{2}$ times the course's unit value in computing total units for subsistence requirements.

Veterans enrolling under the California State Bill need a new certificate for training every semester. Tuition and fees are paid, regardless of unit load, but to receive subsistence under this Bill both graduate and undergraduate students must carry 12 units.

Vocational Rehabilitation

The Vocational Rehabilitation Service of the State Department of Education offers assistance to students who have a physical or mental disability which constitutes a handicap to employment. Included for eligible students are vocational counseling, the payment of tuition and fees and, under certain circumstances, the provision of text books, subsistence and transportation funds, and various medical services. Details may be obtained from the Office of the Dean of Counseling and Testing.

Remedial Services

Assistance is available for students having difficulty in reading, writing, arithmetic, speech, and hearing. The *Class Schedule* lists the offices to be contacted by the student needing such help. These services are not college courses and there is no formal registration.

STUDENT HEALTH SERVICES

Student Medical Services are offered in the centrally located building between the Physical Education and Administration Buildings. A complete medical examination is required for all freshmen, team participants, physical education and education majors. Medical care, including first aid, is given to all students. Extensive immunization program is offered including polio, tetanus, smallpox, typhoid-paratyphoid, etc.

PLACEMENT OFFICE

Los Angeles State College Placement Service is an integral part of Student Personnel Services. Teacher placement and occupational placement comprise the main functions of this office.

The Placement Office helps the students appraise their strengths and weaknesses through counseling and meetings which provide positive job techniques. The avenues of information available to placement furnish the students with supply and demand data, prevailing business conditions, analysis of personnel requests such as subject combinations, geographic distributions of placement, and specific recommendations regarding curricular changes.

To the various divisions of the college, the Placement Office serves as a responsible liaison and source of information, keeping the departments alerted to company and teacher policies, programs, and recruitment needs.

Teacher Placement

Students and alumni who have completed their directed teaching under the supervision of Los Angeles State College are eligible to use the services of the Teacher Placement Office. Credential holders or credential candidates who have taken at least 12 units with the college and have a letter of reference from a faculty member in their major field may use the office as a repository for their confidential papers.

The placement folder is permanently retained. It will remain active for one year unless the candidate is employed during that time. Candidates may reactivate their papers at any time in the future by notifying the Placement Office and supplying current information to bring their files up-to-date.

A directory listing all school districts in the State is provided for student use. Descriptive materials, salary schedules, and applications from numerous school districts are available in the Teacher Placement Office.

There is no registration or service fee.

Occupational Placement

The college maintains an Occupational Placement Office to assist students and alumni in securing suitable permanent positions.

Lists of current openings are retained and opportunities are offered to students to meet with business representatives either on-campus or at the company offices. Constant contact is maintained with business, industry, and government.

Seniors are urged to register early in their last semester in order that they may be referred to employers and to participate in on-campus interviews prior to graduation.

Students who are receiving a degree from Los Angeles State College are eligible for full-time placement. Alumni are always welcome to use the full-time placement facilities.

Part-Time Placement

Students who find it necessary to support themselves wholly or partly while attending college may receive assistance in finding employment through the Part-Time Placement Service. It is important to note that more students apply for work each semester than the Placement Service has jobs to fill. Because of this competition for work, a student may not

find immediate employment or may be required to take work which he would not ordinarily prefer. Students are cautioned regarding heavy part-time work schedules. Those who plan to earn a large part of their expenses are advised to carry a reduced program of studies. In addition to part-time work, opportunities often exist for full-time temporary employment during the summer and other vacation periods.

STUDENT ACTIVITIES

Student Government

The Board of Directors of the Associated Student Body is a policy forming organization for campus activities and organizations. The Cabinet of Commissioners represents the functional arm of the association, and is concerned with athletics, rallies, elections, notifications, homecoming, activities, publications, public relations, National Student Association, student finance, and convocations. Finances and business management are handled by a graduate manager and a budget commission.

All regular and limited students have the rights and privileges of membership in the Associated Student Body and its organizations. Women and men students who are members of the Associated Student Body are eligible for membership in the respective Associated Women Students or Associated Men Students organizations.

All students taking the major portion of their program in late afternoon or evening classes are members of the Extended Day Student Body. Their policy forming organization is the Extended Day Student Council. The council is responsible for the planning of social, educational, and cultural events for Extended Day Students.

Student Organizations

Students may elect membership in any of the departmental, religious, or special interest groups. These, and other organizations, are chartered and co-ordinated by the Inter-Organization Council.

The social fraternities and sororities are regulated by the Interfraternity and Panhellenic councils. Fraternity and sorority handbooks are available at registration and in the Student Activities Offices.

Student Publications

The *College Times* is the day student's newspaper published by the Associated Students. The *Night Times* is the student newspaper published bi-monthly for Extended Day students incorporated as a separate part of the *College Times*. The college yearbook is called the *Pitchfork Statement* is a student literary publication which appears each semester. The *Student Handbook*, published by the Associated Students, serves as a source of information on student functions and student affairs. It includes a detailed description of the nature and objectives of the various organizations. The newspaper for the six weeks summer session is the *Summer Times*.

Scholarships

Descriptive material on scholarships available at Los Angeles State College may be obtained in the Office of the Dean of Student Personnel.

Loans

A limited number of short-term loans are available to assist students with expenses connected with registration. The college participates in the Federal Student Loan Program under the National Defense Education Act. Information about and applications for all loans are available in the Office of the Dean of Student Personnel.

Living Accommodations

There are no dormitories on the campus. Addresses of available living accommodations may be obtained through the Office of the Dean of Student Activities.

Athletics

The intercollegiate athletic program at Los Angeles State College is considered a phase of the physical education program. Participation is open to any full-time undergraduate student in good scholastic standing. Los Angeles State College has the opportunity to participate in regional and national competition through its membership in the National Collegiate Athletic Association, and the California Collegiate Athletic Association. Every effort is made to send athletes and teams to participate in such competition when they have achieved outstanding records.

The college fields teams in 13 intercollegiate sports: football, basketball, track and field, baseball, swimming, water polo, cross country, wrestling, gymnastics, tennis, golf, fencing, and bowling. The coaches of the various sports are faculty members in the Division of Health, Physical Education, Recreation, and Athletics.

COLLEGE LIBRARY

The college library, which can accommodate 1,500 students at one time, has a book collection containing 130,000 volumes. The books are shelved throughout the library by subject, and students and faculty have direct access to all library materials. The five subject rooms are language arts, fine arts, social sciences, science and technology, and education. Each of these subject rooms has a pamphlet collection, and many of them have other collections, as appropriate. The education room has 6,500 California state textbooks and 3,900 units of work and courses of study, all chosen especially for those studying to become teachers. The fine arts room contains a collection of art reproductions, and the social sciences room a file of annual reports of business and other institutions.

The library is an official depository for United States government publications, as well as a depository for California state publications. Files of important municipal documents are maintained. The Perry R. Long Memorial Collection on Printing and Engraving contains almost 2,000 items. The Mary Reynolds Babcock Collection of materials on

Asia contains about 3,000 books. Books which are not obtainable in the Los Angeles area can be borrowed on interlibrary loan by application to the social sciences librarians.

Undergraduates will make especially heavy use of the Limited Loan room, on the first floor, which makes available required course readings as designated by the faculty. Except for the journals pertaining to the fields of science and technology, all periodicals are shelved in the Periodicals room on the second floor. Here are arranged 1,270 periodicals and newspapers by broad subject groups, with the 15,400 bound volumes of backfiles nearby. There are 525 journals in the fields of science and technology which, with their 5,700 bound volumes of backfiles, are in the science and technology room on the third floor. Microtext reading machines are provided, with a complete file of the *New York Times* available on microfilm.

The library has a large collection of encyclopedias, dictionaries, and other reference materials, including 72 abstracting and indexing services received currently. There is a collection of 2,000 college catalogs, and an extensive file of vocational materials.

Students are actively assisted in the use of library facilities by 38 librarians, 29 library assistants, and over 50 part-time student assistants. Near the entrance to the library is the Readers' Advisory Desk, where a librarian is always available to aid students in their search for information. The hours of service for the library are:

Monday through Thursday, 7:45 a.m. to 10:00 p.m.

Friday, 7:45 a.m. to 8:00 p.m.

Saturday, 9:00 a.m. to 1:00 p.m.

Changes in these hours and special schedules for holidays are posted in the library.

Other special facilities include typing rooms, group study rooms, and a browsing area, where a collection of paperbound books invites recreational reading. In the Limited Loan room is a special section where selected titles of the latest books are placed for a short period, before receiving full cataloging.

COLLEGE COMPUTING CENTER

A computing center is operated by the college as an all-campus facility. Students and faculty of many departments of the college use it for instruction and research. The laboratory utilizes an IBM 650 digital computer and peripheral data processing equipment. All aspects of computing are studied and employed. The computing center is administered by a director with a policy committee consisting of representatives from business, engineering and mathematics.

ADMISSION AND REGISTRATION

Admission standards at Los Angeles State College are in accordance with policies stated in the California Administrative Code, Title 5, Education, which provides uniform admission regulations for all California state colleges. The scholarship requirements outlined in this catalog are in accordance with those code provisions which are applicable to Los Angeles State College.

MATRICULATION

Los Angeles State College no longer permits nonmatriculated students to enroll in classes in the fall and spring semesters. All students must matriculate by establishing eligibility for admission in accordance with procedures outlined below.

APPLICATION FOR ADMISSION

The following procedures and requirements apply to undergraduate students (defined as students not having a baccalaureate degree), and graduate students (holders of a baccalaureate degree). For additional information on admission to graduate standing, see page 70 of this catalog.

New Students: Students registering at Los Angeles State College for the first time must file an application with the Office of Admissions and Records on the form provided for that purpose. The deadlines for filing new applications are:

August 15 for the fall semester

January 5 for the spring semester

Returning Students: Students planning to return to Los Angeles State College after an absence of one or more semesters must file an Application for Readmission. The deadlines for filing Applications for Readmission are:

September 1 for the fall semester

January 15 for the spring semester

Continuing Students: Students who maintain continuous attendance from one semester to the next (excluding summer session) need not file an application for each succeeding semester.

TRANSCRIPTS REQUIRED

General Transcript Information: Transcripts are not accepted from the student, but must come directly to the Office of Admissions and Records from the institutions attended. All transcripts become the

property of the college and will not be released. The work taken at one college listed on the transcript of another college is not acceptable.

Filing Deadlines: Processing of an application for admission cannot be completed until ALL transcripts are received. It is important that deadlines be observed. The deadlines for the receipt of transcripts are:

August 15 for the fall semester

January 5 for the spring semester

Work-In-Progress transcripts are accepted to meet the above deadlines. However, where colleges cannot issue final transcripts in time for the processing of an application to be completed, students may bring in signed statements or postal cards from their instructors verifying their grades of the Work-In-Progress. Official transcripts of these final grades must then be sent to the Office of Admissions and Records from the college attended.

Transcripts For Advisement: Students should have a copy of their own transcripts of college work available for use at all times of advisement.

Undergraduate Transcripts Required: Undergraduates must request each high school and college attended to send ONE transcript of their record directly to the Office of Admissions and Records. High school transcripts need only show the last three years of work.

Graduate Transcripts Required: Graduate students seeking a graduate degree or graduate credential must request each college attended to send TWO transcripts of their record directly to the Office of Admissions and Records. Graduate students NOT seeking a degree or credential need request only ONE transcript. (Graduate students also see page 70 of this catalog.)

CANCELLATION OF ADMISSION

A student who is admitted to the college for a given semester but who does not register for that semester will have his admission canceled. If he later seeks admission to the college, he must file a new application and meet the current requirements outlined in the catalog. All transcripts on file will be retained by the Office of Admissions and Records and may be used for admission at a later date. However, transcripts of any additional work since the original transcripts were filed must be requested from the respective colleges.

ADMISSION OF HIGH SCHOOL GRADUATES

An applicant for admission as a freshman must qualify under one of the following provisions:

1. Have completed the equivalent of 7 Carnegie units (14 courses, other than physical education and military science, of one semes-

ter each, meeting five periods per week) with grades of A or B on a five-point scale. These courses must have been completed during the last three years of high school.

2. Have completed the equivalent of 5 Carnegie units (10 courses, other than physical education and military science, of one semester each, meeting five periods per week) with grades of A or B on a five-point scale. The applicant must have completed these courses during the last three years of high school. In addition he must have attained the 20th percentile or higher on the national norm of the college aptitude test given by this college.

Students preparing to enter the college are urged to consult their high school advisers and plan a program in high school that will prepare them adequately to pursue their chosen major at the college level. The following high school courses are recommended as preparation for any college course leading to the bachelor's degree:

English, 3 years; algebra, 1 year; geometry, 1 year; one foreign language, 2 years; American history and civics, 1 year; additional social science, 1 year; chemistry, physics, physiology, or biology, 1 year. Typing is a recommended elective.

Students preparing to enter the fields of natural science and engineering should include additional courses for specific majors. The following courses are recommended:

Chemistry and physics, 1 year credit in each field; advanced algebra, 1 year; trigonometry and solid geometry, 1 year. Recommended electives: Slide rule, mechanical drawing.

ADMISSION OF NON-HIGH SCHOOL GRADUATES

A person 21 years of age or older who is not a high school graduate may be admitted with adult special status by special action. In such cases, the applicant's test scores and experience are evaluated for evidence of ability to do college work.

ADMISSION WITH ADVANCED UNDERGRADUATE STANDING

Applicants Who Were Eligible for Admission with Freshman Standing:

An applicant is eligible for admission with advanced undergraduate standing if he meets all of the following standards:

1. At the time of his graduation from high school, he was eligible for admission with freshman standing in accordance with the standards for "Admission of High School Graduates," page 52.
2. He has earned college credit in one or more accredited degree-granting colleges or universities and attained a grade point average of 2.0 (grade of C on a five-point scale) or better in the total program attempted at such colleges or universities.

3. He was in good standing at the last accredited college or university attended.

Applicants Who Were Not Eligible for Admission With Freshman Standing: An applicant who was ineligible for admission with freshman standing in accordance with the standards for "Admission of High School Graduates," page 52, is eligible for admission with advanced undergraduate standing if he was in good standing at the last accredited college or university attended and meets all of the requirements in either of the following:

1. He has earned in one or more accredited colleges or universities 60 semester units of college credit with a grade point average of 2.0 (grade of C on a five-point scale) or better in the total program attempted at such colleges or universities.
2. He has earned in one or more accredited colleges or universities 24 semester units of credit with a grade point average of 3.0 (grade of B on a five-point scale) or better in the total program attempted at such colleges or universities.

While no specific course pattern is required for admission, students attending other institutions in preparation for transfer to Los Angeles State College should select courses to satisfy General Education requirements (see pages 60-62) and preparatory courses as required in the proposed major field.

Junior College Credit: No unit credit will be allowed for course work taken at a junior college after the student has earned 70 units of junior college or college credit. No upper division credit can be allowed for courses taken in a junior college. No credit may be allowed for professional education courses taken in a junior college.

Credit for Extension and Correspondence Courses: The maximum amount of credit through correspondence courses and extension courses which may be allowed toward the bachelor's degree is 24 units, not more than 12 of which may be transferred from another college or university. Extension course credit does not apply toward the residence requirements at Los Angeles State College.

Credit for Military Service: The college allows undergraduate credit for service in the various branches of the United States Armed Forces in accordance with the recommendations of the American Council on Education. In order to apply for such credit, the student must file with the Office of Admissions and Records a photostatic copy of his honorable discharge. This should be done at the time application for admission is made. Additional credit may be granted for the completion of certain service school work upon presentation of photostatic copies verifying that such work has been completed satisfactorily.

Evaluation of Transfer Credit: The Office of Admissions and Records will evaluate previous college work in terms of its relationship to the requirements of Los Angeles State College. Every effort will be made to provide all new transfer students with this evaluation referred to as "Credit Summary" before the end of their first semester's attendance. A copy of the credit summary will be mailed to the student showing those courses that have been accepted on transfer and those courses that are yet to be taken to fulfill the general education requirements of the college. It will be the student's responsibility to consult with his departmental adviser to plan a program of study. The evaluation is valid as long as the student pursues the objective specified and remains in continuous attendance.

ADMISSION TO GRADUATE STANDING

Requirements for admission to graduate standing and the requirements for advancement to candidacy for the master's degree are described on pages 70-72.

ADMISSION TO TEACHING CREDENTIAL PROGRAMS

Admission to the college as a regular student does not constitute admission to the teaching credential program. Students who intend to work toward credentials must obtain advisement from the Education Division during their first semester of attendance, following the procedure outlined in the section of this catalog dealing with that subject. See pages 142-145.

ADMISSION OF STUDENTS FROM FOREIGN COUNTRIES

International students seeking admission to the United States on the basis of acceptance by this college must fill out a special application available from the Office of Admissions and Records.

Applications will be mailed to prospective students upon request. The application calls for verification of the student's ability to read, speak, and write English, as well as other data necessary to provide a basis for determining the applicant's eligibility. A student seeking admission to the United States should familiarize himself with all pertinent governmental regulations of his home country and the United States.

Credits earned in institutions abroad are evaluated by the Office of Admissions and Records with the co-operation and assistance of the United States Office of Education. Since such evaluations generally require an exchange of correspondence, the applicant is cautioned to apply at least six months in advance of the date when he hopes to begin his studies in this country.

A student from abroad will be admitted only if the college is assured that his needs can be adequately met by the program and curriculum of this college.

The college makes a special effort to assist in the international student's orientation to the American culture and system of education.

REGISTRATION

At the time of registration, every student is required to file with the Office of Admissions and Records an official study list indicating all the courses for which the student is registered.

The *filing of a study list* by the student and its acceptance by the college is evidence of an obligation on the part of the student to perform the designated work to the best of his ability. Withdrawal from, or neglect of, any course entered on the study list, or a change of program, including a change of section of the same course, without formal permission from the Office of Admissions and Records, makes the student liable for a grade of "F" in the course.

A student may not receive credit in any course in which he is not officially registered. The dates for the registration period and instructions for registration are published each semester in the *Class Schedule*.

Study Load

The maximum study load recommended by the college is 16 units. However, upon approval of the faculty adviser, a student may enroll for as many as 18 units. Such approval will not normally be given unless the student's previous scholastic record warrants such action. The only exception to the 16-unit maximum is that a student may register for one additional unit above the 16-unit maximum if the course is one of the following activity courses: Journalism 391-395WXYZ; Music 120, 121, 125-127, 220-222, 225, 320, 321, 325-327, 420-422, 425; Physical Education: any course identified with a "5" as the second digit, and 200-211; Speech 195WXYZ, 196WXYZ, 197WXYZ. Graduate students who are candidates for the master's degree may carry a maximum of 16 units per semester toward their degree requirements.

Auditors

A properly qualified student may apply for admission to attend classes for no credit as an "auditor." The student must meet the regular college entrance requirements and must pay the same fees required of other students. He will not be required to do assignments or take examinations and his enrollment in a class as an auditor is subject to the approval of the instructor. He may not register in a class as an auditor until the Late Registration period. No record of auditing a class will appear on the student's permanent record nor will transcripts be issued for audited classes. The instructor will not issue a grade for an audited class.

Registration in Graduate Courses

An undergraduate student is not permitted to enroll in graduate level courses (those numbered 500-599) except under provisions outlined on page 73. Graduate courses carry no credit toward a bachelor's degree.

Dual Registration

A student wishing to register at Los Angeles State College and also at another institution simultaneously must file a petition with the Office of Admissions and Records, stating the exact course he plans to take and which requirement at Los Angeles State College it may fulfill. The petition must be signed by the appropriate faculty representative.

Late Registration

Students who are unable to register during the regular registration period and who have approval from the Office of Admissions and Records may register late. Late registrants are severely handicapped in arranging their programs and must pay a five dollar (\$5) late registration fee. The last day to register each semester will be announced in the *Class Schedule*.

Adding Courses

Any adding of classes, including a change of sections of the same course, must be processed on the official change-of-program form obtained at the Office of Admissions and Records. Such changes may be made only during the dates indicated in the *Class Schedule*.

Withdrawal From Courses

If a student officially withdraws from a course during the first six (6) weeks of a semester, the course will not be recorded on the Permanent Record. If he withdraws during the sixth to the fourteenth week either a "WP" or a "WF" will be recorded, depending on whether or not he has the approval of the instructor and is doing at least "C" level work at the time of official withdrawal. No withdrawal is permitted after the fourteenth week. Unofficial withdrawal from a class is indicated on the student's permanent record with the letters "UW."

Selective Service Regulation

In order to qualify for a deferment or postponement of military service under selective service procedures, a student must be registered for 15 or more units and must remain in continuous attendance during regular sessions. The college serves as a reporting agency only, and any decisions affecting the student's selective service status will be made by the local board. Certification of registration and attendance to the selective service boards is sent only upon the student's request.

Course Numbering System

- 1- 99 Remedial courses.
- 100-299 Lower division courses of freshman and sophomore level.
- 300-399 Upper division courses of junior and senior level which do *not* give graduate credit.
- 400-499 Upper division courses of junior and senior level which give graduate credit *for graduate students*.
- 500-599 Graduate courses for graduate students only.

The letters A, B, C, or D following the course number, indicate a two-, three-, or four-semester course sequence in which A must be completed before B, and B before C.

The letters W, X, Y, Z, following the course number, indicate a course which may be repeated a specified number of times. Thus, YZ courses may be taken twice, XYZ courses three times, and WXYZ courses four times.

Advisement

Every student should make an appointment with a departmental adviser in the field of his major to plan his first semester's study program. The student should bring a copy of his transcripts for his adviser. When the Credit Summary (see page 55) has been received from the Office of Admissions and Records the student should make an appointment with his adviser to plan his complete program of study for the degree. This plan will be used as a basis for evaluating the student's eligibility to graduate and receive the degree. Changes in this program of study should be made only with the express approval of the student's adviser. It is recommended that the student make an appointment to see his adviser sometime before registration each semester.

Students having difficulty in choosing a major or wishing to change their major should make an appointment with a counselor in the Counseling and Testing Center.

SCHEDULE OF FEES

The regular fees of the college are given below. The fees for auditors are the same as for those receiving credit for a course. Personal checks will not be accepted in payment of college fees. Payment may be made in cash, money order or bank draft.

Registration Fees

(Payable at time of registration)

		<i>Total</i>
Over 6 units		
Materials and service.....	\$36.00	
Student activity	9.00	\$45.00
6 units or less		
Materials and service.....	18.50	
Student activity	5.00	23.50
Nonresident tuition * (in addition to above fees)		
15 units or more		\$127.50
Less than 15 units, per unit		8.50

Other Fees or Charges

(Payable when service is rendered)

Summer Session, per unit	\$11.00
Extension, per unit of lecture	10.00
Extension, per unit of activity	13.00
Extension, per unit of laboratory	20.00
Late registration	5.00

* Foreign visa students must pay nonresident tuition during their entire period of attendance at Los Angeles State College.

Change of program	1.00
Transcript of records (after first copy)	1.00
Diploma fee (not a State fee)	3.00
Library books or materials overdue, damaged or lost (consult the library for schedule of fees)	
Studio music lessons per lesson per student.....	1.00 to 6.00
Failure to meet administratively required appointment or time limit	2.00
Replacement of laboratory equipment lost or broken	Cost

NOTE: Fees are subject to change upon approval by the State Director of Education.

Nonresident Student Fees *

Admission requirements for nonresident students are the same as those for all other applicants and are shown on the succeeding pages. A nonresident tuition fee is payable by all regular and limited students who have not been legal residents of the State of California for one year immediately preceding date of enrollment. This fee amounts to \$8.50 per unit, to a maximum of \$127.50 per semester.

Refund Regulations

Written application for refund of fees must be made to the College Business Office, within time limits prescribed by the State Administrative Code. Application forms and information concerning refunds are available at the Business Office. Early application is important since delay may reduce the amount of the refund received.

Veterans, except those under Public Law 550, receiving a letter of eligibility from the state or federal veterans authorities are entitled to a full refund of registration fees if eligibility commences from the first day of instruction. If eligibility commences after the first day of instruction a prorata refund will be made.

* Foreign visa students must pay nonresident tuition during their entire period of attendance at Los Angeles State College.

CURRICULA OFFERED

BACHELOR'S DEGREE CURRICULA

The Los Angeles State College offers three types of bachelor's degree: bachelor of arts (B.A.), bachelor of science (B.S.), and bachelor of vocational education (B.V.E.).

Bachelor of Arts Degree. The bachelor of arts degree is offered with majors in: American Studies; Art; Biological Science; Botany; Business Education; Chemistry; Drama; Economics; Education (Elementary Education, Kindergarten-Primary Education, Junior High Education, and Special Education-Deaf); English; Geography; Geology; Government (with options in General Government, Government Service, International Relations, and Pre-Legal); History; Home Economics; Home Economics in Business; Industrial Arts; Journalism; Language Arts; Mathematics; Microbiology; Music; Philosophy; Physical Education; Physical Science; Physics; Psychology; Social Science; Social Studies; Sociology (with options in General Sociology and Social Welfare); Spanish; Speech; Speech Correction; Zoology.

Bachelor of Science Degree. The bachelor of science degree is offered with majors in: Business Administration (with options in Accounting; Business Arts; Business Economics and Statistics; Finance; Management; Marketing; Office Administration; Special Business; Real Estate; Insurance; Labor Relations); Chemistry; Engineering; Geology; Mathematics; Medical Technology; Nursing; Physics; Police Science and Administration; Printing Management; Recreation Education; Sanitary Science.

Bachelor of Vocational Education Degree. The bachelor of vocational education degree is offered for those vocational teachers recommended by the California State Board of Examiners for Vocational Teachers. Vocational teachers interested in details regarding this program should see the Chairman of the Division of Technical Sciences.

GENERAL REQUIREMENTS FOR BACHELOR'S DEGREE

General Education Requirement

General education is nonspecialized education taken by all students, regardless of the type of bachelor's degree or the major field selected.

A liberal education encourages the student to enjoy cultural and intellectual freedom. Such freedom may result if the student learns to communicate effectively; to understand some of the basic principles of the natural world about him; to grasp the significance of man's endeavor to understand himself and his relationship to others, to his past, and to his physical environment; to appreciate beauty in many forms; to recognize the values, ideas, and assumptions that give meaning to his existence.

The faculty of Los Angeles State College has developed a general education program designed to form the minimum core of each student's liberal education. To increase the likelihood that the experiences provided in this program will result in increased cultural and intellectual

freedom for the student, each general education course has these characteristics:

- (1) It makes explicit the method or process of the discipline it represents.
- (2) It makes explicit the relationships that exist between its fields of inquiry and other fields of inquiry.
- (3) It assists the student to apply to and gain from the everyday experiences that surround him the insights obtained from a study of materials which may be somewhat further removed in time and distance.

In addition, courses are required in physical education designed to teach the student skills in a variety of physical recreational activities.

Each candidate for the baccalaureate degree must satisfy either through courses accepted by the Office of Admissions and Records upon transfer, or through the specifically designated courses at Los Angeles State College, a minimum of 45 units distributed in the following pattern:

I. Social Sciences 9 units minimum

Required courses

Government 150—Government and American Society (3)

History 250—United States History (3)

and *one* of the following

Anthropology 250—Cultural Anthropology (3)

Geography 150—Human Geography (3)

Economics 150—Economics for the Citizen (3)

Sociology 250—Man and Society (3)

II. Natural Sciences 9 units minimum

Required courses

Biological Science 153—Principles of Biology I (3)

Physical Science 151—Principles of Physical Science I (3)

Biological Science 154—Principles of Biology II (3)

or

Physical Science 152—Principles of Physical Science II (3)

III. The Humanities 9 units

Required courses

Art 150—Art, Music, and Dance I (3)

Philosophy 150—Philosophical Ideas (3)

English 250—Understanding Literature (3)

IV. Communication 6 units minimum

Required courses. This requirement may be met by one of two alternative routes:

1. A year course sequence.

Language Arts 150AB—Written and Oral

Communication (3-3)

or

2. Two single semester courses.

English 150—Written Expression (3)

Speech 150—Oral Expression (3)

NOTE: English 150 and Speech 150 may be taken in either order; Language Arts 150A must be taken before Language Arts 150B. Language Arts 150A *or* B may not be combined with English 150 or Speech 150.

V. Personal and Social Fitness 7 units minimum

All courses required.

Psychology 150—Human Behavior (3)

Health and Safety 350—Personal Health (2)

Physical Education 150—Fundamentals of Physical Education (1)

Physical Education Activities (Courses numbered 151-154, 251-254, and 351-354) (1)

VI. Electives 5 units

The student who takes only the minimal number of courses in each of the five fields will have accumulated 40 units. He will then complete his 45 units by selecting 5 or more units from among the following:

1. Any excess of units earned in meeting the requirements of I through V.
2. Any of the courses listed under I above which were *not* taken to complete the minimum requirements in Social Sciences, and History 450—Senior Colloquium in History (3)
3. Biological Science 154—Principles of Biology II (3)
or
Physical Science 152—Principles of Physical Science II (3)
(Whichever was not taken as a part of minimum requirements in II above.)
4. Any Physical Education general education activities courses not taken as a part of the minimum requirements listed under V above.
5. Any of the following:
 - Conservation 354—Conservation of Natural Resources (3)
 - French 150—Basic Patterns in French (3)
 - German 150—Basic Patterns in German (3)
 - Mathematics 353—Mathematics for General Education (3)
 - Nature Studies 355—Natural Science and California Culture (3)
 - Philosophy 250—Logic (3)
 - Russian 150—Basic Patterns in Russian (3)
 - Spanish 150—Basic Patterns in Spanish (3)

Students choosing to major or minor in certain subjects, notably the sciences and engineering, will in the course of completing the requirements for their major or minor, meet the objectives of certain of the general education courses. For this reason exceptions are made to the general education requirements as follows:

<i>Curriculum</i>	<i>Courses not required</i>
Biological science teaching major	Biological Science 153, 154, and Physical Science 151
Biological science teaching minor	Biological Science 153, 154, and Physical Science 151
Botany Major	Biological Science 153, 154, and Physical Science 151
Chemistry major	Physical Science 151, 152
Engineering major	Physical Science 151, 152; and two General Education electives

<i>Curriculum</i>	<i>Courses Not Required</i>
English major	English 250 ‡
Geology major	Physical Science 151, 152
Government major	Government 150 ‡
Health education minor	Health and Safety 350 ‡
History major	History 250 ‡
Medical technology major	Biological Science 153, 154, and Physical Science 151
Microbiology major	Biological Science 153, 154, and Physical Science 151
Nursing major	Health & Safety 350, Biological Science 153, Physical Science 152
Philosophy major	Philosophy 150 ‡
Physical education major	Physical Education 150 and Physical Education Activities.*
Physical science teaching major	Physical Science 151, 152, and Biological Science 153
Physical science teaching minor	†Physical Science 151, 152, and Biological Science 153
Physics major	Physical Science 151, 152
Psychology major	Psychology 150 ‡
Social Studies major	History 250 ‡
Speech major	Speech 150 ‡
Zoology major	Physical Science 151, and Biological Science 153, 154

Major Department Requirements

Each student must complete the requirements outlined by the department of his selected major field. Requirements for the various departmental majors are listed in the appropriate sections of this bulletin.

Total Unit Requirement

The bachelor of arts and the bachelor of vocational education degrees require completion of 124 units. The bachelor of science degree requires 124-132 units, depending upon the major field selected. At least 40 units must be in courses carrying upper division credit.

Scholarship Requirement

The student must earn at least a 2.0 grade point average in all college work attempted.

* Physical education majors and minors are required to take one additional general education elective course.

† See footnote page 320.

‡ Students in these curriculums must take elective general education courses to fulfill the required 45 units.

Residence Requirement

For the bachelor of arts, bachelor of science, and bachelor of vocational education degrees a minimum of 24 semester units shall be earned in residence at Los Angeles State College. At least one-half of these units shall be completed among the last 20 semester units counted toward the degree. Credit in summer session may be substituted for regular session unit requirements on a unit-for-unit basis. Extension courses may not apply on the residence requirement.

U. S. History and Constitution Requirement

The requirements set by California law of (1) American history (2) United States Constitution, and (3) California State and local government must be met by all graduates. This includes demonstrating competence in the Constitution of the United States, in American history, including the study of American institutions and ideals, and the principles of state and local government established under the Constitution of this State. The requirements may be met by optional examinations, or by completing successfully one course from each of the following groups:

1. American History: History 250.
2. United States Constitution: Government 150.
3. California State and Local Government: Government 150, 200.

Transfer students who have already met these requirements shall not be required to take further courses or examinations therein, but will be required to satisfy the General Education requirements.

Optional examinations for both American history and United States Constitution will be held on November 17, 1961 and April 27, 1962, 1 to 4 p.m. Information on the above requirements may be obtained from the Office of Admissions or from the Social Sciences Division, American Institutions Committee.

Students will be eligible to take the optional examinations under the following conditions:

1. All graduate students at Los Angeles State College will be eligible, provided they meet requirement (3) below.
2. Undergraduates will be eligible to qualify by examination only when their program *upon admission* does not allow sufficient units to complete the necessary courses.
3. Students must be currently enrolled in Los Angeles State College.
4. Students must not have already failed this optional examination.
5. Application must be made to the American Institutions Committee at least three weeks prior to date of examination.

All applications must be approved by the Committee on American Institutions.

Application for Graduation

A formal application for graduation must be filed by the student with the Office of Admissions and Records. The registration period of the student's last semester is the final deadline for filing this application. However, students are urged to apply for graduation during the registration period of the semester just prior to the semester they plan to graduate. This allows time to notify the student of remaining requirements before his final semester.

Faculty Approval

All candidates for graduation must be approved by the faculty at a formal meeting called by the President for that purpose.

SCHOLARSHIP POLICIES

Grading System

The marking system is as follows. The letters A, B, C, and D indicate passing grades: A, excellent; B, above average; C, average; D, below average; Cr. denotes credit, no letter grade assigned. Failure is indicated by F. WF means "withdrew failing." This mark is assigned a student who is below average at the time he is allowed to withdraw from a course. WP ("withdrew passing") is assigned if a student is doing average work or better at the time of official withdrawal. UW indicates "unofficial withdrawal."

If a student is unable to complete all of the semester's work, but has satisfactorily finished all except the final four weeks, he may receive an "incomplete" (recorded "Inc."). An "Inc." grade must be cleared within one year from the end of the semester in which it was received. Otherwise it remains an incomplete grade on the student's record and is counted as an "F" in calculating the grade point average. In certain cases this rule will not apply to graduate students. Requirements for clearance are to be specified by the instructor concerned.

The scholarship average is obtained by dividing the total number of grade points by the total number of units attempted, or for which the student registered. Grade points are assigned as follows:

Grade A receives 4 points per unit of the course taken.

Grade B receives 3 points per unit of the course taken.

Grade C receives 2 points per unit of the course taken.

Grade D receives 1 point per unit of the course taken.

Grade F or WF or UW or Inc. receives 0 points per unit of the course taken.

Grade WP is not figured in the grade point average.

Grade CR is not figured in the grade point average.

NOTE: The above grade-point system became effective September 1, 1956. Previously a grade of A has given 3 grade points per unit; B, 2 grade points; C, 1 grade point; D and F, 0 grade points.

Repeated Courses

Students may repeat courses in which a grade of D, F, or I was previously received. However, both the original grade and grade earned in the repeated course will be figured in the calculation of the student's grade point average. No additional credit toward semester unit require-

ments will be allowed for repeat of course in which the initial grade was "D."

Scholastic Standing

Students who are experiencing scholastic difficulties are urged to discuss their progress with their adviser, as well as with the college's Counseling Office.

Probation: A student whose scholarship record shows a grade point average of less than "C" (2.0) for all work attempted at Los Angeles State College will be placed on probation. Students placed on probation at Los Angeles State College are required to make an appointment with a counselor in the Counseling and Testing Center.

Disqualification: A student who earns less than a "C" (2.0) average in a semester while on probationary status will be disqualified. Disqualified students are not permitted to register. Under certain conditions disqualified students from Los Angeles State College may apply for readmission after the lapse of at least one semester. The deadlines are January 5 for the spring semester, and August 15 for the fall semester. The readmission forms are obtainable from the Office of Admissions and Records.

Honorable Dismissal

In order to qualify for an honorable dismissal, the student must be free from financial obligations to the college and from disciplinary action. Academic disqualification does not constitute dishonorable dismissal.

Examinations

Final examinations or final class meetings are required in all courses and shall be held at the time and place as shown in the *Class Schedule*. Any exception in time or place must be approved by the Vice President.

No final examination shall be given to individual students before the scheduled time. Any student who finds it impossible to take a final examination and the date scheduled must make arrangements with the instructor to have an incomplete grade reported and must take deferred examination not later than one calendar year after the incomplete grade was assigned. No exception shall be made to this rule without the written approval of the instructor and the chairman of the division.

Attendance Regulations

The effect of absence from class upon the student's grade is at the discretion of the individual faculty member. In courses involving lectures and direct student participation, absence will undoubtedly affect the student's grade. The student is responsible to the instructor to make up work missed because of unavoidable absence.

THE GRADUATE PROGRAM

The Graduate Program at Los Angeles State College is most simply and clearly defined as study in depth—an offering by the college of learning experiences designed to increase the student's knowledge and understanding of a particular field of study. The primary objective is professional, to enable the student to use his learning in order that he may advance in his chosen vocation, that he may better fill positions of leadership, and that he may promote the improvement of his profession. A second purpose of the graduate study program is to help the student develop a more intelligent awareness of himself in relation to other people and cultures, both now and of the past, and better understanding of his profession in relation to the general world of work. Completion of a master's degree program at Los Angeles State College should also better prepare the student to take additional graduate degree work in line with his abilities and ambitions.

In order that he may gain maximum benefit from this graduate program, the student should have the following characteristics:

1. He should have gained sufficient knowledge and understanding in his field of study to enable him to begin additional study at an advanced level.
2. He should have acquired the basic techniques, skills, and methods necessary for research investigation.
3. He should have sufficient maturity and intellectual curiosity to enable him to undertake independent study and to pursue learning in his field beyond the level of regular assignments.
4. The student's achievements, aptitudes and abilities should be at a superior level, enabling him to do scholastic work considerably above the average.

In terms of its objectives and its students, Los Angeles State College develops its various master's degree programs in accordance with the following guidelines:

1. All courses included in the program are at an advanced level of study, with prerequisites appropriate to each.
2. Each program includes a core of courses required of all students, expressing the judgment of the faculty concerning the basic knowledges needed by the students.
3. Each program includes some courses allowing students a choice in terms of their interests and needs.
4. Courses included in each program will result in a cohesive pattern, each related to the other and to the program objectives.
5. Courses will be developed in clear relationship to the demands of the profession which is the goal of the program.
6. The pattern of courses will allow the student a variety of learning experiences—lecture, discussion, seminar, and independent study. Primary emphasis will be upon the opportunities for independent study and the sharing of such study with small groups of students interested in the same field.

7. A culminating experience will enable the student to demonstrate his understanding of the inter-relationship of his learnings, to show his ability to express his thoughts clearly and effectively, and to demonstrate his knowledge and appreciation of research as related to the advancement of both himself and his field of study.

At Los Angeles State College, those courses with "400" and "500" numbers carry graduate credit, with provision that "400" courses earn graduate credit only when taken after awarding of the bachelor's degree. In order to assure a more consistent and appropriate level of study for graduate courses, the college has developed the following statements on course characteristics:

The 400 Course: These courses present subject-matter appropriate to the maturity and experiences of advanced students. In the majority of instances, "400" courses have stated prerequisites of lower- or upper-division work in the field of study. Some, however, may have a more general prerequisite, such as "upper-division standing." Whether based upon specific or general previous preparation, the "400" courses emphasize those knowledges and skills necessary to depth of scholarship in the field. Restricted in scope (depth rather than breadth), these courses require a high degree of intellectual maturity and offer considerable opportunity for independent study and investigation.

A distinction is to be made between "400" courses acceptable for teaching credentials at the graduate level and those that are also acceptable for master's degree programs. Courses *not* acceptable for degree programs (except as prerequisites) are (a) activity courses, (b) elementary and intermediate skills courses, (c) supervised teaching, and (d) elementary courses in professional methods. The various departments have the responsibility for determining how these courses may be used in their programs.

The 500 Course: Limited to students who have been admitted to graduate status, these courses are more advanced and intensive than undergraduate courses. They require more intensive preparation and study by both student and professor, and need more extensive library facilities than do the undergraduate courses. Such courses assume a broad base of knowledge, such as that acquired from above-average work for a bachelor's degree, and some depth of preparation in the field of study, as specified in course prerequisites.

Students in these classes should have demonstrated competence in clear, cogent, and accurate communication of ideas, as indicated by "B" grades or better in appropriate courses, or by performance gaged by explicit standards. Library and laboratory facilities, as well as collections, must be such as to give adequate provision for the independent study and investigation required by this kind of course.

Such a course is concerned with more complex ideas, materials, techniques, or problems than the undergraduate courses and demands more searching and extensive analysis. In particular, the graduate course requires the investigation of the principles which distinguish the disciplines of which the course is a part, the discovery and application of sound principles of analysis to new materials and problems, the development of competence in independent inquiry through training in the use of materials and methods of independent study and the demonstration of this competence through effective oral and written presentation of the findings of such inquiries. The satisfactory completion of three units of graduate study should require from the student, not only more work, but more creative work than three units of undergraduate study.

The Graduate Seminar: A special type of "500" course, the seminar is a culminating course taken in the latter part of the master's degree program. It is a small discussion class (not more than fifteen students) engaged in advanced

study and research on interrelated subjects under the close supervision of a qualified member of the faculty.

It is distinguished from a course that is primarily a lecture-discussion by its emphasis on critical attention to the investigative or creative work being done by members of the class. Each student conducts individual research and investigation which is closely supervised and evaluated by the professor. Progress reports on the research may be shared with the class at assigned times throughout the semester. These reports may serve as focal points for class discussions. A final oral report may be made to the class and a carefully written report of the research and investigation is usually submitted to the professor.

THE MASTER OF ARTS DEGREE

The purpose of the master of arts degree is to provide for one or more of the following objectives:

- (1) To improve the candidate's professional competence in educational service.
- (2) To develop the candidate's ability for continued self-directed study in his field of specialization.
- (3) To afford an opportunity for the candidate to broaden his cultural background, to develop his personal and social responsibility, and to prepare for community leadership.

The degree is offered in the following fields of concentration:

American studies	Music
Art	Music Education
Biological Science	Physical Education
Drama	Psychology
Economics	Secondary School Administration
Elementary School Administration	Secondary School Teaching
Elementary School Teaching	Secondary Teaching with Specialization in Industrial Arts
English	Social Science
Geography	Sociology
Government	Special Education
Guidance	Speech
Health and Safety Education	Speech Correction and Audiology
History	Speech and Drama
Language arts	
Mathematics	

THE MASTER OF SCIENCE DEGREE

The purpose of the master of science degree is to improve the candidate's competence in his chosen occupation, and to develop his ability for continued self-directed study.

The degree is offered in the following fields:

- Business Administration
- Psychology
- Public Service, with options in
 - Police Administration
 - Government
- Recreation
- Vocational Rehabilitation Counseling

Specific requirements for the degree in each field are contained in the descriptions of programs under the appropriate departmental listings. Those requirements as well as the following college requirements should be carefully studied by students seeking a master's degree at the college. *Responsibility for meeting all requirements rests with the student.*

TEACHING CREDENTIALS

Los Angeles State College is accredited by the State Board of Education to recommend qualified students for the following credentials:

- General Elementary Credential
- Kindergarten-Primary Credential
- Junior High School Credentials
- General Secondary Credential *
- Special Secondary Credential in
 - Art
 - Business education
 - Homemaking
 - Limited industrial arts
 - Music
 - Physical education
- Credential to Teach Exceptional Children, with specialization in
 - Visually Handicapped *
 - Deaf and Hard-of-hearing in Special Day Classes
 - Speech Correction and Lipreading in Remedial Classes
 - Mentally Retarded
 - Orthopedically Handicapped including the Cerebral Palsied *
- Elementary Administration Credential *
- Secondary Administration Credential *
- Supervision Credential *
- General Pupil Personnel Services Credential *
 - Pupil counseling
 - Child welfare and attendance
 - School psychometry
 - School psychology

Los Angeles State College offers courses which may qualify a graduate to receive the following credential upon *direct* application to the State Department of Education:

- Health and development credential—school nurse

ADMISSION TO TEACHING CREDENTIAL PROGRAMS

Admission to the college as a regular student does not constitute admission to the teaching credential program. Students who intend to work toward credentials must obtain advisement from the Education Division during their first semester of attendance.

ADMISSION TO GRADUATE STANDING

In accordance with the newly established policy of the college, all students, including graduates, are required to become matriculated. An appropriate baccalaureate degree from an accredited institution is required for admission to graduate standing (the same as matriculation).

* Graduate credential for which the Aptitude Test of the Graduate Record Examination is required.

Applications for admission and other information may be obtained from the office of Admissions and Records.

1. Graduates of Los Angeles State College will automatically receive admission to graduate standing if they maintain continuous registration in the college. If residence is interrupted for one or more semesters, students must file a returning student's application for readmission.
2. New graduate students must file an application for admission with the office of Admissions and Records and arrange to have *two* copies of transcripts of all previous college work sent to the office of Admissions and Records.
3. Students who have been in continuous attendance at the college need not file an application for admission for each succeeding semester, *except that continuing students who have been in attendance as nonmatriculated students must file an application for admission as new students for the fall semester, 1961.*
4. Graduate students who are unable to obtain necessary transcripts for their first semester of attendance may be given *temporary* admission to graduate standing for *one semester only* by filing an application for admission, including a declaration that they possess either an acceptable bachelor's degree or a valid teaching or public school service credential.
 - a. Graduate students granted *temporary* admission to graduate standing who are *not* seeking a graduate degree or credential must have a transcript from the college granting the bachelor's degree sent to the office of Admissions and Records in order to register for the second and succeeding semesters.
 - b. Graduate students granted *temporary* admission to graduate standing who are seeking a graduate degree or credential must file *two* copies of transcripts of all previous college work and fulfill all other requirements for admission to graduate standing in order to register for the second and succeeding semesters.

GRADUATE RECORD EXAMINATION

The Aptitude Test of the Graduate Record Examination is required of all graduate students seeking a graduate degree or graduate credential. If this test has been taken previously, the student should arrange with the Educational Testing Service, Princeton, New Jersey, to have a record of scores sent to the Graduate Study office. All other students must make arrangements to take the test with the College Test office, located in the Administration Building. The test should be taken as early as possible in order that advisers may have the results as an aid in counseling students about their programs.

ADVANCEMENT TO CANDIDACY

Requirements for advancement to candidacy for the master's degree are:

1. Admission to the college with graduate standing, which includes filing duplicate transcripts of all previous college work.
2. Completion of the aptitude test of the Graduate Record Examination and filing of test scores in the Graduate Study Office.
3. Consultation with adviser and planning of program.
4. Approval of program by adviser and division or department chairman.
5. (a) A 2.75 (B-) upper-division grade point average; or
(b) complete in residence 12 units of the proposed degree program including at least 6 units in the field of concentration, with a grade point average of 3.00 (B) or better.
6. Completion of all prerequisites to the degree program and enrollment in one or more courses in the field of concentration.
7. Approval of program and other requirements by the Graduate Study Committee. Action of the Graduate Study Committee will be based upon the student's academic record, personal qualifications, health, and professional promise.

In making out his program and in applying for advancement to candidacy, the student should keep in mind the requirements for graduation as listed below, particularly the regulation that at least nine units must be completed after the semester in which the student is advanced to candidacy.

ADVISING

The importance of early adviser conference and program planning cannot be over-emphasized. Each student working toward a master's degree must work out his program with an adviser assigned by the chairman of the division in which the student expects to receive his degree. Early in his first semester of residence (if the workload permits), each student will receive from the Office of Admissions and Records a "Credit Summary" upon the basis of which he and his adviser may plan his program. The program sheet, as worked out by the student and his adviser and signed by the appropriate division or department head, becomes the student's application for advancement to candidacy.

Program-application forms are available in each division office. Two copies of the special ozalid paper form are required, in addition to the work forms to be retained by the student and his adviser. The two official forms should be forwarded by the adviser, department head or division chairman to the Graduate Study Office for review and action by the Graduate Study Committee.

CHANGE OF PROGRAM

Conformance to the final, approved program is required. Proposed changes must be approved in writing by the adviser, division chairman or department head, and the Dean of Graduate Study. Change of program forms are available in division offices or in the Graduate Study Office.

GENERAL PROVISIONS FOR MASTER'S DEGREE

1. Advancement to candidacy is prerequisite to enrollment for the graduate project or thesis (599) and for taking the comprehensive examination.
2. An undergraduate student who is in his final semester may apply toward graduate credit the difference between the number of units necessary for graduation and a maximum of 15 units, provided he has maintained a 2.5 overall average in all upper division work. Only a student with a 3.0 average may include in this allowance a maximum of 3 units of "500" courses. Requests for graduate credit under this provision must be made by petition to the Petitions Committee during the term in which the courses are taken.
3. Students who wish to obtain a second master's degree from Los Angeles State College must complete a minimum of 15 semester units of new work and satisfy all other requirements of the new degree. Approval for the second degree will be given only after the first degree has been awarded.
4. Courses in which the student receives a grade of "D" are not acceptable for unit credit on the degree program.
5. Courses numbered "399" and below are not acceptable for master's programs.
6. For students entering on and after September 1, 1961, student teaching is *not* acceptable on either the Master of Arts degree or the Master of Science degree.

REQUIREMENTS FOR GRADUATION

1. At least 30 units of approved courses taken within the seven years immediately preceding the date when all requirements for the degree are completed and the degree is granted. Within these 30 units, the following requirements also apply:
 - a. Each program requires a minimum of 12 units in strictly graduate ("500") courses.
 - b. Completion of a field of concentration of a minimum of 15 units, including not less than nine units in strictly graduate courses, as prescribed by a division of the college authorized to offer a graduate program.

- c. Each program must have at least six units outside the field of concentration. (Does not apply to the Master of Science degree.)
 - d. At least 24 units must be completed in residence at Los Angeles State College.
 - e. A student who is working toward the Master of Science degree must have at least one year of work-study experience or one year of full-time (or equivalent part-time) occupational experience in the major field or a closely related field. Those students who have no such experience are required to complete six units of directed field study in addition to the regular 30 units required for the Master of Science degree.
2. Postgraduate courses completed more than seven years prior to the time of expected graduation must be replaced by other more recent courses; or they may be validated by examination in the relevant subject field.
 3. The master's degree program may include no more than six units total credit for acceptable: (a) transferred work; (b) extension courses; (c) activity courses; (d) work-study; or any combination of these. The restriction as to work-study does not apply to the Master of Science degree. Student teaching is not acceptable for either the Master of Arts degree or the Master of Science degree. All such courses must be completed at the graduate level and at an accredited institution in order to be accepted in the degree program.
 4. At least nine units of the degree program must be completed *after* the semester in which the student has been formally advanced to candidacy.
 5. Each student must have a 3.0 (B) grade point average as follows:
 - a. In the field of concentration; and
 - b. In all courses, including pre-requisites, listed on the student's approved program for the master's degree; and
 - c. In all courses beyond the bachelor's degree that would qualify as master's degree work, whether taken at Los Angeles State College or any other college.
 6. Every program requires the passing of a comprehensive examination and/or the completion of a thesis or project in the field of concentration as prescribed by the appropriate division of the college.
 7. Every program must conform with specific requirements for the degree program as described in this catalog and/or as determined by the student's adviser.

AMERICAN STUDIES

(Inter-Divisional Program)

STAFF: Hillbruner (Coordinator). Faculty from co-operating disciplines within the Divisions of Business and Economics, Education, Fine Arts, Language Arts, and Social Sciences.

BACHELOR'S DEGREE CURRICULA

Major in American Studies

Designed for students who (1) elect to study the liberal arts through the interdisciplinary approach of American Studies, or (2) plan to engage in such professions as journalism, librarianship, government service, writing or others where a broad knowledge of American society is required.

Lower Division

No lower division requirements.

Upper Division

The student will take from 6 to 9 units in each of four fields, with 9 units required in at least two of the four fields. In addition he will take 12 units of integrating courses in American Studies.

American Studies (12 units)

American Studies 401—The Study of American Culture.....	3 units
American Studies 402—Ideas in America.....	3 units
American Studies 403—American Popular Culture.....	3 units
American Studies 404—The Avant-Garde in American Intellectual Life..	3 units

American Language and Literature (6-9 units)

At least <i>one</i> course from the following	3 units
English 470—Masters of American Literature, 1620-1860 (3)	
English 471—Masters of American Literature, 1860-1950 (3)	
English 475—Major American Novelists: Crane to Faulkner (3)	
Journalism 440—History and Philosophy of the Mass Media (3)	
Speech 443B—Development of the Theater (3)	
Speech 467Z—Great Speakers of the Western Tradition (3)	

At least <i>one</i> course from the following	3 units
English 401—American English Dialects (3)	
English 427—Modern American Drama (3)	
English 472—Twentieth Century American Literature (3)	
English 473—The American Renaissance (3)	
English 474—Major American Novelists: Cooper to James (3)	
English 491—Studies in Selected American Writers (3)	

American Philosophy and the Fine Arts (6-9 units)

At least <i>one</i> course from the following	3 units
Music 478—History and Literature of American Music (3)	
Philosophy 430—American Philosophy (3)	

At least *one* course from the following 3 units

Art 441—American Art (3)

Philosophy 440—Contemporary Philosophy (3)

American Social Studies (6-9 units)

At least *one* course from the following 3 units

Government 413—American Political Thought (3)

Geography 421—Geography of the U. S. and Canada (3)

History 476—Economic History of the U. S. (3)

History 477—Social History of the U. S. (3)

History 479—Constitutional History of the U. S. (3)

At least *one* course from the following 3 units

Economics 303—Money, Banking and the Economy (3)

Economics 390—Current Economic Problems (3)

Government 305—American Federal Government (3)

Government 414—Public Opinion and Lobbies (3)

Government 420—Political Sociology (3)

History 471—The U.S.: The Colonial Period (3)

History 472—The U.S.: Federal Union (3)

History 473—The U.S.: Sectionalism, Civil War and Reconstruction (3)

History 474—The U.S.: Emergence of the Modern Nation

History 475—The U.S.: A World Power

History 478—Diplomatic History of the United States (3)

History 481—The Westward Movement and the West (3)

Sociology 330—The City (3)

Sociology 420—Political Sociology (3)

Sociology 424—Mass Communication and Propaganda (3)

Sociology 426—Sociopathic Behavior (3)

Sociology 432—Regional Sociology (3)

Sociology 434—Population (3)

Sociology 445—Sociology of Religion (3)

Sociology 448—Social Stratification (3)

Sociology 460—Intergroup Relations (3)

Sociology 478—Social Legislation (3)

American Origins in Western Civilization (6-9 units)

At least *one* course from the following 3 units

Art 421—Baroque Art (3)

Art 426—Modern Art (3)

English 463—The English Renaissance (3)

English 465—The Age of Reason (3)

English 467—The Romantic Age (3)

English 468—The Victorian Age (3)

English 480—Literature and the Fine Arts, B.C. (3)

English 481—Literature and the Fine Arts, A.D. (3)

History 434—Europe: The Renaissance to Waterloo (3)

History 441—Hanoverian England (3)

History 442—The British Empire (3)

Philosophy 338—Comparative Religions (3)

Speech 443A—Development of the Theater (3)

Speech 467Y—Great Speakers of the Western Tradition (3)

At least *one* course from the following 3 units

- Economics 480—Comparative Economic Systems (3)
- English 400—History of the English Language (3)
- English 466—The British Novel from Richardson to Joyce Cary (3)
- English 469—Twentieth Century British Literature (3)
- English 482—The Bible as Literature (3)
- English 484—Contemporary World Literature (3)
- English 486—The Continental Novel (3)
- Geography 423—Geography of Europe (3)
- Government 412—Political Theory (3)
- Government 430—European Government (3)
- Government 442—The Anglo-American Legal System (3)
- History 411—The Early Mediterranean World and Greece (3)
- History 412—History of Rome (3)
- History 421—The Early Middle Ages (3)
- History 422—The Later Middle Ages (3)
- History 432—Europe: The Nineteenth Century (3)
- History 433—Europe: The Twentieth Century (3)
- History 438—Economic History of Europe (3)
- History 440—Tudor and Stuart England (3)

Additional courses in any two of the required four fields 6 units

(Additional courses are available to the student if selected with consent of the American Studies adviser.)

42 units

TYPICAL FOUR-YEAR COURSE SEQUENCE FOR AMERICAN STUDIES MAJOR

Since the American Studies curriculum is characterized by the scope and breadth of its offerings, the following sequence of courses is purely for illustrative purposes rather than prescribing a specific program the student is to follow. The student will be assisted in planning his entire program in the major by an American Studies adviser.

Lower Division

Since there are no lower division requirements, the student follows the general education program, choosing, in addition, electives from the fields of American language and literature, American philosophy and fine arts, American social studies, and American origins in western civilization.

Junior Year			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Amer. Studies 401—Study of		Amer. Studies 402—Ideas in Amer.	3
Amer. Culture	3	Engl. 472—20th Cent. Amer. Lit.	3
Engl. 470—Amer. Lit. 1620-1860	3	Hist. 477—Soc. Hist. of U.S.	3
Phil. 430—Amer. Phil.	3	Econ. 480—Comp. Econ. Sys.	3
Hist. 442—The British Empire	3	Electives	3
Electives	3		

Senior Year

Amer. Studies 403—Amer. Popular Culture	3	Amer. Studies 404—Avant-Garde in Amer. Intellect. Life	3
Art 441—American Art	3	Geog. 421—Geog. of Europe	3
Govt. 418—Amer. Pol. Parties and Politics	3	Sp. 467Y—Great Speakers of the Western Tradition	3
Electives	6	Electives	6

General Secondary Teaching Program*With a B.A. in American Studies*

This program combines a baccalaureate major in American Studies and two teaching minors, one in social studies and the other in English. The student must meet the following requirements:

1. Professional education requirements. See pages 142-145.
2. Requirements of the general secondary teaching minor in English. See page 195.
3. Requirements of the general secondary teaching minor in social studies. See page 353.
4. Courses in the fields of American Studies chosen with the approval of an American Studies adviser.

Students interested in this program will be assisted in planning their entire program in the major by an American Studies adviser.

MASTER OF ARTS DEGREE

1. Prerequisite: B.A. degree with a major or its equivalent in any of the humanities, in any of the social sciences, or in American Studies.

2. Required core in area of concentration.

American Studies 501—Selected Problems in American Civilization 3 units

At least *two* courses from the following 6 units

American Studies 401—The Study of American Culture (3)

American Studies 402—Ideas in America (3)

American Studies 403—American Popular Culture (3)

American Studies 404—The Avant-Garde in American Intellectual Life (3)

3. Six courses selected with the approval of the American Studies adviser as follows 15 units

American Language and Literature (3-6 units)

One or two courses from the following:

English 505—Seminar in Language (3)

English 520—Seminar in Literature (3)

Journalism 520—Seminar in Journalism (3)

Language Arts 506—Seminar in Communication Problems (3)

Speech 567—Studies in American Public Address (3)

Speech 560—Speech Education in America (3)

American Philosophy and the Fine Arts (3-6 units)

One or two courses from the following:

Art 500—Seminar in Art Education (3)

Art 531—Seminar in Art History (3)

Music 401—Psychology of Music (2)

Philosophy 440—Contemporary Philosophy (3)

Philosophy 475—Aesthetics (3)

American Social Studies (3-6 units)

One or two courses from the following:

- Economics 510—Advanced Economics of an Enterprise System (3)
- Economics 520—Contemporary Economic Theory (5)
- Government 505YZ—Seminar in Contemporary American National Government (3-3)
- Government 518—Seminar in Political Problems (3)
- Government 560—Seminar in Public Administration (3)
- Government 561—Seminar in State and Local Administration (3)
- History 575—Seminar in United States: Recent (3)
- History 577—Seminar in United States: Cultural and Intellectual (3)
- History 581—Seminar in United States: The West (3)
- Psychology 500—Seminar in Advanced General Psychology (3)
- Psychology 501—Seminar in Advanced General Psychology (3)
- Psychology 522—Seminar in Social Psychology (3)
- Social Science 550AB—Seminar in Social Science (3-3)
- Sociology 514—Studies in Contemporary Sociology (3)
- Sociology 534—Population Problems and Urbanization (3)
- Sociology 540—Seminar in Marriage and the Family (3)
- Sociology 570—Studies in Social Welfare and Corrections (3)

American Education (0-6 units)

From the following:

- Education 507—History and Philosophy of Education (3)
- Education 510—Advanced Educational Psychology (3)
- Education 525—Educational Sociology (3)
- Education 553—The Core Curriculum in Junior and Senior High Schools (2)

4. Electives selected with the approval of adviser..... 6 units
5. Required Comprehensive Examination: This written examination will be administered by the interdivisional American Studies Committee. If necessary the written examination will be supplemented by an oral one.

COURSES OF INSTRUCTION

401 The Study of American Culture (3) Fall

Introduction to interdisciplinary study of American culture. Materials, methods, and problems in the study of a civilization in comprehensive terms.

402 Ideas in America (3) Fall, Spring

Significant social, political, economic, religious, and philosophic concepts which characterize American civilization; analysis of these concepts as reflected in representative statements, ranging from historical documents to imaginative literature. (Formerly Language Arts 400.)

403 American Popular Culture (3) Fall, 1960

Study of popular culture as exemplified in radio and television programs, motion pictures, advertising, mass circulation magazines, popular music, and other mass entertainments, in order to extract the underlying social significance and aesthetic implications.

404 The Avant-Garde in American Intellectual Life (3) Spring, 1961

Examination of a number of movements on the frontiers of American intellectual life.

GRADUATE COURSES

Graduate standing is prerequisite to registration in the following:

501 Selected Problems in American Civilization (3)

A study of selected problems of both historical and contemporary importance whose ramifications in American life merit interdisciplinary consideration.

ANTHROPOLOGY

(In the Division of Social Sciences)

See Sociology and Anthropology Section

ART

(In the Division of Fine Arts)

STAFF: Manion (Department Head), Askin, Borman, Brainard, Cassady, Cornish, Crawshaw, Daywalt, Fuller, Heath, Hoffman, Johnson, Little, Mack, Metcalf, Rossell, Roysher, Silverman, Starbird, Schnitzler, Takeshita, Uribe, Wexler, Williams, Wirth.

BACHELOR'S DEGREE CURRICULA

Major in Art

The curriculum in art and the requirements for the degree provide a broad base and thorough grounding in all phases of art. The department considers this breadth essential to each art major regardless of his eventual field of specialization. With this foundation, a student may prepare himself as a teacher, designer, painter, or craftsman by selecting appropriate art courses and electives in consultation with his adviser.

Lower Division

Art 101—Art in Modern Life	2 units
Art 102—Introduction to Crafts	2 units
Art 103—Art Structure	2 units
Art 104—Introduction to Drawing	2 units
Art 212—General Crafts	2 units
Art 213YZ—Applied Art Structure	2 units
Select from the following	2 units
Art 224—Descriptive Drawing (2)	
Art 234—Introduction to Painting (2)	
Art 244—Introduction to Life Drawing (2)	
Electives in Art	2 units

Upper Division

Select from the following	6 units
Art 411—Ancient Art (3)	
Art 416—Medieval Art History (3)	
Art 421—Baroque Art (3)	
Art 426—Modern Art (3)	
Art 431YZ—Oriental Art (3-3)	
Art 441—American Art (3)	
Art 461—Primitive Art (3)	
Select from the following	6 units
Art 314—Introduction to Sculpture (2)	
Art 324YZ—Clay Modeling (2-2)	
Art 404YZ—Advanced Painting (3-3)	
Art 434YZ—Watercolor Painting (3-3)	
Art 444YZ—Oil Painting (2-2)	
Art 464AB—Life Composition (2-2)	
Art 484YZ—Sculpture (2-2)	

Select from the following 4 units

- Art 307—Ceramics (2)
- Art 372YZ—Metalsmithing-Jewelry (2-2)
- Art 412YZ—Advanced Ceramics (2-2)
- Art 422YZ—Advanced Crafts (3-3)
- Art 432—Textiles (2)
- Art 447—Weaving (2)
- Art 462YZ—Metalsmithing-Forging (2-2)
- Art 482YZ—Metalsmithing-Raising (2-2)

Select from the following 4 units

- Art 408YZ—Graphic Communication (2-2)
- Art 413AB—Lettering, Calligraphy, Typography (2-2)
- Art 423—Product Design (2)
- Art 443—Architectural Design (2)
- Art 463—Portfolio (2)
- Art 473—Costume Design (2)
- Art 478—Fashion Design (2)
- Art 483—Interior Design (2)

Electives in Art 4 units

40 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR ART MAJOR

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Art 101—Art in Mod. Life	2	Art 102—Intro. to Crafts	2
Art 103—Art Structure	2	Art 104—Intro. to Drawing	2
*Engl. 150—Written Expr. <i>or</i>		Art 150—Art, Dance, Music	3
Lang. Arts 150A	3	*Sp. 150—Oral Expr. <i>or</i>	
Biol. Sci. 153—Prin. of Biology <i>or</i>		Lang. Arts 150B	3
Phys. Sci. 151	3	Biol. Sci. 153—Prin. of Biology <i>or</i>	
Govt. 150—Govt. & Amer. Soc.	3	Phys. Sci. 151	3
P.E. 150	1	Phys. Educ. elective	1
Elective	2	Elective	2

SOPHOMORE YEAR

Art 212—Gen. Crafts	2	Art 213—Applied Art Structure	2
Art 224, 234, or 244	2	Art Elective	2
Engl. 250—Understanding Lit.	3	Phil. 150—Phil. Ideas	3
Biol. Sci. 154—Prin. of Biology <i>or</i>		Psych. 150—Human Behavior	3
Phys. Sci. 152	3	Gen. Educ. Soc. Sci. elective	3
Hist. 250—U. S. History	3	Elective	3

JUNIOR YEAR

Art 411, 421, 431, or 441	3	Art 408, 413, 463, 473, <i>or</i> 493	2
Art 314, 324, 404, 434, 444, 464 or		Art 307, 320, 330, 410, 412, 422, 432,	
484	3	462, 372, 482	2
H&S 350—Personal Health	2	Art 324, 404, 434, 444, 464, or 484	2
Electives	7	Gen. Educ. elective	3
		Electives	7

* See "Note" on page 61.

SENIOR YEAR			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Art 416, 426, 431, or 441	3	Art 408, 413, 463, 473, 478, 483 or 493	2
Art 324, 404, 434, 444, 464, or 484	3	Art 307, 320, 330, 410, 412, 422, 432, 462, 372, 482	2
Gen. Educ. elective	3	Art elective	2
Electives	6	Electives	9

Special Secondary and General Secondary Teaching Majors

Requirements for the special secondary and general secondary teaching majors are the same as for the major in Art *with the following exception*: Art 300—Art for the Elementary School (2) is required and upper division electives in art are reduced to 2 units. The general secondary teaching major requires a teaching minor in a different teaching field and a graduate year including additional professional education. See also pages 142-145 for professional education requirements.

SUGGESTED COURSE SEQUENCE FOR ART MAJOR WITH SPECIAL SECONDARY CREDENTIAL

Freshman Year and Sophomore Year Same as for Art Major

JUNIOR YEAR			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Art 300—Art for the Elem. Sch.	2	Art 408, 413, 463, 473, or 493	2
Art 411, 421, 431, or 441	3	Art 307, 320, 330, 410, 412, 422, 432, 462, 372 or 482	2
Art 324, 404, 434, 444, 464, or 484	3	Art 324, 404, 434, 444, 464, or 484	2
H&S 350—Personal Health	2	Gen. Educ. elective	3
Educ. 300—Intro. Cred. Prog.	N.Cr.	Educ. 471—Sec. Educ.	5
Educ. 413—Psych. and Soc.	5	Educ. 493—Methods	2

SENIOR YEAR			
Art 416, 426, 431, or 441	3	Art 408, 413, 463, 473, 478, 483, or 493	2
Art 324, 404, 434, 444, 464, or 484	3	Art 307, 320, 330, 410, 412, 422, 432, 462, 372, or 482	2
Gen. Educ. elective	3	Art elective	2
Educ. 443Y—Directed Teaching	3	Educ. 490—Audio-Visual	2
Educ. 444Y—Prob. in Sec. Tchng.	1	Educ. 443Z—Directed Teaching	3
Elective	2	Educ. 444Z—Prob. in Sec. Tchng.	2
		Elective	2

SUGGESTED COURSE SEQUENCE FOR ART MAJOR WITH GENERAL SECONDARY CREDENTIAL

Freshman Year and Sophomore Year Same as for Art Major

JUNIOR YEAR			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Art 300—Art for the Elem. Sch.	2	Art 408, 413, 463, 473, or 493	2
Art 411, 421, 431, or 441	3	Art 307, 320, 330, 410, 412, 422, 432, 462, 372, or 482	2
Art 324, 404, 434, 444, 464, or 484	3	Art 324, 404, 434, 444, 464, or 484	2
H&S 350—Personal Health	2	Gen. Educ. elective	3
Educ. 300—Intro. Cred. Prog.	N.Cr.	Educ. 413—Psych. and Soc.	5
Minor	5	Minor	2

SENIOR YEAR

Art 416, 426, 431, or 441.....	3	Art 408, 413, 463, 473, 478, 483 or 493	2
Art 324, 404, 434, 444, 464, or 484	3	Art 307, 320, 330, 410, 412, 422, 432, 462, 372, or 482	2
Gen. Educ. elective	3	Art elective	2
Educ. 471—Sec. Educ.	5	Educ. 493—Methods (Major)	2
Minor	2	Minor	7

GRADUATE YEAR

Educ. 442Y—Directed Teaching....	3	Educ. 480—Fund. Counsel. & Guid.	2
Educ. 444Y—Prob. in Sec. Tchng.	1	Educ. 442Z—Directed Teaching....	3
Educ. 490—Audio-Visual	2	Educ. 444Z—Prob. in Sec. Tchng.	2
Educ. 493—Methods (Minor)	2	Minor	3
Minor	3	Electives	5
Electives	4		

General Secondary Teaching Minor

Lower Division

Art 101—Art in Modern Life	2 units
Art 102—Introduction to Crafts	2 units
Art 103—Art Structure	2 units
Art 104—Introduction to Drawing	2 units
Electives in Art	2 units

Upper Division

Art 300—Art for the Elementary School	2 units
Art 330—Crafts for the Secondary School	2 units
Select from the following	2 units
Art 307—Ceramics (2)	
Art 372YZ—Metalsmithing-Jewelry (2-2)	
Art 432—Textiles (2)	
Select from the following	2-3 units
Art 404YZ—Advanced Painting (3-3)	
Art 434YZ—Watercolor Painting (3-3)	
Art 464AB—Life Composition (2-2)	
Electives in Art	2 units

20-21 units

MASTER OF ARTS DEGREE

The purpose of the master of arts degree with the major in art is to improve the candidate's competence in educational service and in professional performance. It should stimulate his awareness of over all problems in art and develop his ability for continued self-directed study in the field of his professional service. It should encourage him to seek out or strengthen an area of special interest.

1. Prerequisites

- a. Graduate standing.
- b. Upper division art core requirements or equivalent.

2. Area of Specialization

- | | |
|---|---------|
| a. Art 531—Seminar in Art | 3 units |
| b. Graduate courses in area | 3 units |
| Art 500—Problems in Art Education (3) | |
| Art 501—Graduate Problems in Art History (3) | |
| Art 502YZ—Graduate Problems in Crafts (3-3) | |
| Art 503YZ—Graduate Problems in Design (3-3) | |
| Art 504YZ—Graduate Problems in Representation (3-3) | |
| c. "500" and "400" courses in area | 9 units |
| (Students must take 12 units of "500" courses) | |
| d. Art 599—Graduate Project | 3 units |
| 3. Electives in art and related fields selected with assistance of graduate adviser | 6 units |
| 4. Outside the field | 6 units |

COURSES OF INSTRUCTION**101 Art in Modern Life (2) Fall, Spring**

Art in relationship to contemporary living. Appreciation and understanding of what art contributes to the environment, its influence on personalities, and its part in our democratic culture.

102 Introduction to Crafts (2) Fall, Spring

Introductory course in crafts providing comprehensive experiences in the materials of the crafts; wood, clay, metal, paper, plastic, and leather.

103 Art Structure (2) Fall, Spring

Introductory experiences in two and three dimensional structure including space arrangement, lettering, color theory, and vocabulary.

104 Introduction to Drawing (2) Fall, Spring

Drawing experiences using a variety of media including charcoal, pencil, pen and ink and conté crayon. Development of individual creative understanding of form, structure, light and dark color, and the relationships of the visual structural elements.

150 Art, Music, and Dance (3) (General Education)

Approaches to appreciating, understanding and creating art, dance, and music.

212 General Crafts (2) Fall, Spring

Prerequisite: Two units of crafts. Experiences in the processes of the crafts involving construction of leather accessories, basic elements of weaving and bookbinding. Techniques of printing on cloth and paper employing silk screen, linoleum blockprinting and stencilling.

213Y-Z Applied Art Structure (2-2) Fall, Spring

Experiences in two and three dimensional media, work with color and space relationships, study of symbolism as it relates to graphics; rendering; and the use of materials. Transfer of abstract experiences into real and applied situations.

224 Descriptive Drawing (2) Fall, Spring

Laboratory course to develop skills in all types of rendering; perspective; orthographic projection; isometric drawing.

234 Introduction to Painting (2)

Creative use of color based on an understanding of visual structural elements. Study and manipulation of various media including water-color and oil.

244 Introduction to Life Drawing (2)

Basic concepts of figure drawing. Experience includes experimentation leading toward understanding of the form, structure, and proportions of the human figure as applied to visual expression.

300 Art for the Elementary School (2) Fall, Spring

Basic skills and understanding that enable the primary and elementary teacher to provide art experiences for children. Work with finger painting, watercolor painting, calcimine painting, mapmaking, manuscript writing, mural painting, figure drawing, chalk drawing, and other media.

307 Ceramics (2) Fall, Spring

Introduction to clay and clay technology. A foundation course with laboratory practice in hand construction processes, decorative processes and experimental research into the nature of clay.

314 Introduction to Sculpture (2) Fall, Spring

Basic sculptural experiences and use of sculpture tools. Work in stone, clay, and metal; direct carving and modeling; armature construction for heads and figures; making molds and casts.

320 Crafts for the Elementary Schools (2) Fall, Spring

Basic skills and understandings that enable the primary and elementary teacher to provide crafts experiences for children. Work with clay, leather, bookbinding, weaving, block printing, paper enrichment, and other craft materials and processes.

324Y-Z Clay Modeling (2-2) Fall, Spring

Experiences in using clay as an expressive medium. Various approaches in modeling forms from nature and in the abstract. Uses of texture and surface treatment. Some experience in casting.

330 Crafts for the Secondary School (2) Fall, Spring

Basic skills and understandings which enable the secondary school-teacher to provide worthwhile craft experiences in keeping with the growth and development characteristics of the secondary school student.

340 Industrial Arts for the Elementary School (2) Fall, Spring

Development of skills with handtools used in construction. Experience in making materials used in dramatic play to enrich the social studies.

372Y-Z Metalsmithing—Jewelry (2-2) Fall, Spring

Manufacture and design of jewelry; basic bending, forming, and soldering techniques; stone setting.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study plan. Analysis and reports of the student's performance; regular group meetings.

404Y-Z Advanced Painting (3-3) Fall, Spring

Prerequisite: Two units of painting. Emphasizes planning, and fine craftsmanship. Related research in painting laboratory, field trips.

408Y-Z Graphic Communication (2-2) Fall, Spring

Experiences in rendering in a variety of media for direct mail packaging, point of sale, display, illustration, poster, and billboard.

410 (310) Art Experiences for Exceptional Children (2) Fall, Spring

Art experiences in painting, crafts, and other media which meet the needs of retarded or handicapped children. Work with paint, clay, leather, block printing, murals, and bookbinding.

411 Ancient Art (3) Fall, Spring

Art of the ancient world from prehistoric times to the beginning of the Christian Era.

412Y-Z Advanced Ceramics (2-2) Fall, Spring

Prerequisite: Two units of ceramics or consent of instructor. Use of the potter's wheel. Laboratory experience with the tools, clays, clay bodies, and techniques fundamental to the formation of ceramic ware by means of the potter's wheel.

413A-B Lettering, Calligraphy, and Typography (2-2) Fall, Spring

Emphasis on production and printing techniques. Working with presses, type fonts, inks, and papers.

416 Medieval Art (3) Fall, Spring

The progress of art from early Christian times through the Renaissance.

421 Baroque Art (3) Fall, Spring

Art of Western Europe from Michelangelo to the middle of the Nineteenth Century.

422Y-Z Advanced Crafts (3-3) Fall, Spring

Prerequisite: Two units of general crafts. Provides student with opportunity to pursue further selected areas of the crafts. Emphasis on professional quality in technical skill, design quality and experimentation with original adaptations of processes.

423 Product Design (2) Fall, Spring

Practice in the manipulation of three dimensional form relative to the functional and merchandising requirements of industrial assignments.

426 Modern Art (3) Fall, Spring

Art of the Nineteenth Century and its development into contemporary times.

431Y-Z Oriental Art (3-3) Y—Fall; Z—Spring

Ancient graphic and plastic arts of China, Japan, India, and Persia. Evaluation of their contribution to the art expression of the present day.

432 Textiles (2)

Design of printed fabrics including use of silk screens, linoleum block prints, stencils, and dyes. Emphasis on creative design and experimentation.

434Y-Z Watercolor Painting (3-3) Fall, Spring

Prerequisite: Two units of painting. Techniques of watercolor painting. Advanced studies in pictorial construction through landscape figure and still life.

441 American Art (3) Fall, Spring

History of the painting, sculpture, architecture, and minor arts of America from the coming of the white man to the present.

443 Architectural Design (3) Fall, Spring

Study of exterior and interior problems and solutions inherent in domestic and industrial architecture.

444Y-Z Oil Painting (2-2) Fall, Spring

Development of technique in oil painting through interpretation of landscape, still life, figure and non-objective themes.

447 Weaving (2) Fall, Spring

Use of four-harness floor and tale looms. Techniques of warping, dressing loom and acquaintance with basic types of weaving and materials. Individual projects involving designing and weaving of custom fabric.

461 Primitive Art (3) Fall, Spring

Study of the arts of primitive peoples, past and present, including American Indians, African Negro, and the Pacific Islanders and their relation to the cultures.

462Y-Z Metalsmithing—Forging (2-2) Fall, Spring

Prerequisite: Two units of metalsmithing or consent of instructor. Beginning and advanced techniques of forging metal; forming of flatware, decorative sections, handles, and special applications.

463 Portfolio (2) Fall, Spring

Techniques, methods, and media of displaying portfolio form. Laboratory, field trips, and accompanying lectures. Of especial value to art majors who wish to enter the teaching field.

464A-B Life Composition (2-2) Fall, Spring

Prerequisite: Two units of life drawing, or consent of instructor. Use of the human figure in composition utilizing various media and techniques.

473 Costume Design (2) Fall, Spring

Develops skills necessary to design costumes for stage, street, and other occasions. Recommended particularly for Home Economics students.

474Y-Z Print Making (2-2) Fall, Spring

Prerequisite: Two units of drawing. Graphic processes: etching, engraving, lithography, woodblock printing. Work in black and white, and color.

478 Fashion Design (2) Fall, Spring

Experiences in fashion design, its relation to high style, and the commercial development of fashion. Working with rendering and production methods.

482Y-Z Metalsmithing—Raising (2-2) Fall, Spring

Prerequisite: Two units of metalsmithing, or consent of instructor. Beginning and advanced hollowware techniques; sheet metal and stretch processes; spouts, handles, bodies, and box forms; hinging.

483 Interior Design (2) Fall, Spring

Prerequisite: One semester of design. The elements of visual expression and design related to contemporary concepts of interior work and living space needs. Recommended for Home Economics students.

484Y-Z Advanced Sculpture (2-2) Fall, Spring

Prerequisite: Beginning sculpture, or consent of instructor. Realization of the human and animal forms in permanent materials. Techniques of stone carving, casting, and making of kiln-fired sculptures.

493 Commercial Graphics (2) Fall, Spring

Prerequisite: Art 103 or consent of instructor. Basic technical illustration methods for the presentation of service instructions, production methods, and sales promotion visual material.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES**500 Problems in Art Education (3) Fall, Spring**

Prerequisites: Teaching experience, 20 units of art, or consent of instructor. Opportunities for teachers in the field to evaluate their experiences in the light of new techniques and concepts, resolve problems through group interaction and study, acquire a more complete background in subject matter through individual research and experimentation.

501 Graduate Problems in Art History (3) Fall, Spring

Prerequisites: Graduate standing, six units in area of art history, or consent of instructor. Independent research into the evolution of an idea, philosophy or art form. Periodic group presentations and critical analysis.

502Y-Z Graduate Problems in Crafts (3-3) Fall, Spring

Prerequisites: Graduate standing. Six units of crafts, four in a specific area, or consent of instructor. Individual investigation in a specific area of crafts. Advanced work in laboratory and research under a specialist in the field.

503Y-Z Graduate Problems in Design (3-3) Fall, Spring

Prerequisites: Graduate standing. Six units of design, or consent of instructor. Independent and interdependent library and laboratory research into problems of contemporary design permitting student to pursue his special interests in advanced areas.

504Y-Z Graduate Problems in Representation (3-3) Fall, Spring

Prerequisites: Graduate standing. Eight units in area of representation, or consent of the instructor. Independent laboratory development in a given approach to painting, graphics, and sculpture. Development of individuality and depth in work is encouraged. Periodic group analysis.

531 Seminar in Art (3) Fall, Spring

Prerequisites: Graduate standing. Twenty-four units of art or consent of instructor. Individual research on special problems in the field of art.

599 Graduate Project (3)

AUDIOLOGY

(In the Division of Education)

STAFF: Jeffers, Kinstler.

Course offerings in audiology are designed to serve two major purposes: (1) provide graduate preparation leading to a master of arts degree in audiology and speech correction or a master of arts degree in special education; (2) provide specialized courses in the field of hearing for candidates for a credential to teach deaf children.

Nurses or teachers interested in satisfying the requirement for the public school audiometrist certificate should elect Education 427—Hearing and Its Measurement.

MASTER OF ARTS DEGREE IN SPEECH CORRECTION AND AUDIOLOGY

(Offered jointly with the Department of Speech)

1. Prerequisites: An appropriate baccalaureate degree from an accredited institution with a major in speech correction and hearing, or a credential in speech correction and lip-reading, or the equivalent in course work. Formal conference with assigned adviser is required for formulation of the degree program.
2. Graduate Core Program—

Speech 535—Seminar in Speech Disorders.....	3 units
Speech 537—Seminar in Speech Pathology: Stuttering.....	3 units
Speech 538—Seminar in Neuropathologies of Speech.....	3 units
3. Areas of Concentration—Candidates may select Speech Correction *or* Audiology as their area of concentration.
 - A. Speech Correction:

Speech 436—Diagnostic Clinic	2 units
Speech 539YZ—Clinical Practice in Speech Correction.....	4 units
In consultation with adviser select at least two courses from the the following	6 units
Education 536—Seminar in Hearing (3)	
Audiology 511—Advanced Audiology (3)	
Audiology 540—Audiological Instrumentation (3)	
 - B. Audiology:

Education 536—Seminar in Hearing.....	3 units
Audiology 511—Advanced Audiology	3 units
Audiology 540—Audiological Instrumentation	3 units
In consultation with adviser select at least three units from the following	3 units
Audiology 529—Advanced Clinical Practice in Aural Rehabilitation (1-3)	
Audiology 541—Advanced Clinical Practice in Hearing Evaluation (1-1-1)	
4. Electives

Psychology 412—Child Psychology (3), Psychology 438—Clinical Psychology (3), Psychology 512—Psychology of behavior (3), 9 units.

5. Written comprehensive examination. When the examining committee deems it necessary, the final written comprehensive examination may be supplemented with an oral comprehensive examination.

(The program is designed to meet the academic requirements for advanced certification in the Speech and Hearing Association.)

COURSES OF INSTRUCTION

429W-X-Y-Z Clinical Practice in Aural Rehabilitation

(2-2-2-2) Fall, Spring

Prerequisites: Education 427, 428, and 420, or consent of instructor. Supervised clinical experience in diagnostic and rehabilitation techniques with children and adults who have hearing losses.

441W-X-Y-Z Clinical Practice in Hearing Evaluation

(1-1-1-1) Fall, Spring

Prerequisites: Education 427, 428, and 420, or consent of instructor. Supervised clinical experience in diagnostic hearing evaluation and hearing aid selection.

Hearing and Its Measurement. See Education 427.

Speech Audiometry and Aural Rehabilitation. See Education 428.

Speech Reading. See Education 420.

GRADUATE COURSES

511 Advanced Audiology (3)

Prerequisites: Education 427 and 428 or consent of instructor. Instruction and practice in advanced audiometric techniques, including difference limen testing, delayed feedback, and P. G. S. R. Problems of noise in industry, psychogenic overlay, malingering, and relation of audiometric configuration to medical diagnosis.

529X-Y-Z Advanced Clinical Practice in Aural Rehabilitation

(1-3) Fall, Spring

Prerequisites: Education 427 and 428, Audiology 429W, or consent of instructor.

540 Audiological Instrumentation (3)

Prerequisites: Education 427 and 428 or consent of instructor. Physical characteristics of hearing aids; relation of these characteristics to fitting of hearing aids; study of current models with emphasis on instrument adjustment. Desirable electro-acoustic characteristics of auditory training and speech audiometry units.

541X-Y-Z Advanced Clinical Practice in Hearing Evaluation

(1-1-1) Fall

Prerequisites: Audiology 441 or consent of instructor.

Seminar in Hearing. See Education 536.

BIOLOGICAL SCIENCES

(In the Division of Science and Mathematics)

STAFF: Anderson (Co-ordinator), Bair, Caplin, Clothier, Eriksen, Griesel, Hanson, Harvey, Hovanitz, Lowrie, Ross, Sacher, Straw, Vance, Welsh.

BACHELOR'S DEGREE CURRICULA

Two major programs leading to the general secondary credential in Life Science—General Science are available in the biological sciences. These are:

1. A teaching major in Biological Science with an accompanying minor in Physical Science.
2. A teaching major in Biological Science with a separate minor outside the science field.

A teaching minor in Biological Science is also offered.

Professional education requirements for the above majors and the minor are shown on pages 142-145.

General Secondary Teaching Major in Biological Science

(With accompanying minor in Physical Science)

This program is designed to provide the prospective teacher of secondary school biological science with (a) a strong background in basic botany, microbiology, and zoology; genetics; animal physiology; plant classification; and related fields; (b) training in chemistry and physics adequate for teaching physical sciences; (c) sufficient depth in the biological sciences for entrance into a graduate biology program or junior college teaching.

Lower Division

Botany 100—General Botany	5 units
Microbiology 200—General Microbiology	5 units
Zoology 100—General Zoology	5 units
Chemistry 101—General Chemistry	5 units
Chemistry 102—General Chemistry and Qualitative Analysis	5 units
Geology 101—Physical Geology	4 units
Mathematics 100—Basic Mathematical Analysis	4 units
Physics 101—Physics I	4 units
Physics 102—Physics II	4 units

Upper Division

Biological Science 410—Genetics	3 units
Botany 440—Plant Classification	4 units
Zoology 430—Animal Physiology	4 units

Select <i>one</i> of the following	3-4 units
Biological Science 460—General Ecology (4)	
Nature Study 461—Nature in California (3)	
Select <i>one</i> of the following	3-4 units
Biological Science 420—Histological Methods (3)	
Biological Science 421—Cytology (4)	
Nature Study 381—Science Materials (3)	
Select <i>one</i> of the following	4 units
Botany 420—Morphology of Vascular Plants (4)	
Botany 421—Morphology of Nonvascular Plants (4)	
Botany 422—Plant Anatomy (4)	
Botany 425—Mycology (4)	
Botany 430—Plant Physiology (4)	
Select <i>one</i> of the following	3-4 units
Zoology 423—Comparative Anatomy (4)	
Zoology 424—Embryology (4)	
Zoology 443—Cold-blooded Vertebrates (3)	
Zoology 444-445—Birds of California (2-2)	
Zoology 446—Mammalogy (4)	
Select <i>one</i> of the following	3-4 units
Zoology 440—Invertebrate Zoology (4)	
Zoology 441—Entomology (4)	
Zoology 447—Marine Zoology (3)	
* Chemistry 308—Elementary Organic Chemistry (4) <i>or</i>	3-4 units
Physics 401—Modern Physics	3-4 units
	71-76 units

* Chemistry 401A-B (6 units) may be substituted for Chemistry 308.

SUGGESTED COURSE SEQUENCE FOR GENERAL SECONDARY TEACHING MAJOR IN BIOLOGICAL SCIENCE

(With accompanying minor in Physical Science)

FRESHMAN YEAR			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Bot. 100—Gen. Botany <i>or</i>		Bot. 100—Gen. Botany <i>or</i>	
Zool. 100—Gen. Zoology	5	Zool. 100—Gen. Zoology	5
Chem. 101—Gen. Chemistry	5	Chem. 102—Gen. Chemistry	5
Math. 100—Basic Math. Anal.	4	*Engl. 150—Written Expr. <i>or</i>	
P.E. 150	1	Lang. Arts 150A	3
		Govt. 150—Govt. and Amer. Soc. ..	3
SOPHOMORE YEAR			
Micro. 200—Gen. Micro.	5	Geol. 101—Phys. Geol.	4
Physics 101—Physics I	4	Physics 102—Physics II	4
*Sp. 150—Oral Expr. <i>or</i>		Art 150—Art, Dance, Music	3
Lang. Arts 150B	3	Phil. 150—Phil. Ideas	3
Psych. 150—Human Behavior	3	H&S 350—Personal Health	2
Phys. Educ. elective	1		

* See "Note" on page 61.

JUNIOR YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Chem. 308—Elem. Org. Chem. <i>or</i>		Bot. 440—Plant Class.	4
Physics 401—Modern Physics	3-4	Bio. Sci. electives	3-4
Zoology elective	3-4	Gen. Educ. elective	3
Hist. 250—U. S. History	3	Educ. 413—Psych. and Soc.	5
Engl. 250—Underst. Lit.	3		
Gen. Educ. elective	3		
Educ. 300—Intro. Cred. Prog.	N. Cr.		

SENIOR YEAR

Biol. Sci. 410—Genetics	3	Bio. Sci. 460—Gen. Ecology <i>or</i>	
Gen. Educ. Soc. Sci. elective	3	N. S. 461—Nature in Calif.	3-4
Educ. 471—Sec. Educ.	5	Zool. 430—Animal Physiology	4
Educ. 493—Methods	2	Educ. 493—Methods	2
Electives	2	Electives	5-6

GRADUATE YEAR

Botany electives	3-4	Zoology elective	3
Educ. 443—Directed Teaching	3	Educ. 443—Directed Teaching	3
Educ. 444Y—Prob. in Sec. Tchng.	1	Educ. 444Z—Prob. in Sec. Tchng.	2
Educ. 480—Fund. Counsel. & Guid.	2	Educ. 490—Audio-Visual	2
Electives	5-6	Electives	5

NOTE: When a student has completed lower division requirements plus a minimum of 24 units in upper division courses in the biological sciences, a B.A. degree in biological science will be awarded if all other graduation requirements have been met. The graduate year must include 6 units of biological or physical sciences in the 400 series.

General Secondary Teaching Major in Biological Science

(Minor to be taken outside the science field)

This program is designed for students with a primary interest in the biological sciences but who do not desire a minor in the physical science field. It aims to develop a strong background in biological sciences while including only the necessary basic courses in the physical sciences.

Lower Division

Botany 100—General Botany	5 units
Microbiology 200—General Microbiology	5 units
Zoology 100—General Zoology	5 units
Chemistry 101—General Chemistry	5 units
Mathematics 100—Basic Mathematical Analysis	0-4 units*
Physics 101—Physics I	4 units
Physics 102—Physics II	4 units

Upper Division

Biological Science 410—Genetics	3 units
Botany 440—Plant Classification	4 units
Zoology 430—Animal Physiology	4 units
Select <i>one</i> of the following	3-4 units
Biological Science 460—General Ecology (4)	
Nature Study 461—Nature in California (3)	
Select <i>one</i> of the following	4 units
Botany 420—Morphology of Vascular Plants (4)	
Botany 421—Morphology of Nonvascular Plants (4)	
Botany 422—Plant Anatomy (4)	
Botany 425—Mycology (4)	
Botany 430—Plant Physiology (4)	

* May be met by a high school background which is certified as adequate by the Department of Mathematics.

Select *one* of the following _____ 3-4 units

Zoology 423—Comparative Anatomy (4)

Zoology 424—Embryology (4)

Zoology 443—Cold-blooded Vertebrates (3)

Zoology 444-445—Birds of California (2-2)

Zoology 446—Mammalogy (4)

Select *one* of the following _____ 3-4 units

Zoology 440—Invertebrate Zoology (4)

Zoology 441—Entomology (4)

Zoology 447—Marine Zoology (3)

52-59 units

SUGGESTED COURSE SEQUENCE FOR GENERAL SECONDARY TEACHING MAJOR IN BIOLOGICAL SCIENCE

(Minor to be taken outside the science field)

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Bot. 100—Gen. Botany <i>or</i>		Zool. 100—Gen. Zoology <i>or</i>	
Zool. 100—Gen. Zoology _____	5	Bot. 100—Gen. Botany _____	5
Chem. 101—Gen. Chemistry _____	5	**Engl. 150—Written Expr. <i>or</i>	
Math. 100—Basic Math. Analysis _____	4	Lang. Arts 150A _____	3
P.E. 150 _____	1	Govt. 150—Govt. and Amer. Soc. _____	3
		Psych. 150—Human Behavior _____	3
		Elective _____	2

SOPHOMORE YEAR

Micro. 200—Gen. Micro. _____	5	Physics 102—Physics II _____	4
Physics 101—Physics I _____	4	Art 150—Art, Dance, Music _____	3
**Sp. 150—Oral Expr. <i>or</i>		Hist. 250—U. S. History _____	3
Lang. Arts 150B _____	3	H. & S. 350—Personal Health _____	2
Phil. 150—Phil. Ideas _____	3	Minor _____	4
Phys. Educ. elective _____	1		

JUNIOR YEAR

Zoology elective _____	4	Bot. 440—Plant Class. _____	4
Engl. 250—Underst. Lit. _____	3	Gen. Educ. elective _____	3
Gen. Educ. Soc. Sci. elective _____	3	Educ. 413—Psych. and Soc. _____	5
Gen. Educ. elective _____	3	Minor _____	4
Educ. 300—Intro. Cred. Prog. _____	N.Cr.		
Minor _____	3		

SENIOR YEAR

Bio. Sci. 410—Genetics _____	3	Biol. Sci. 460—Gen. Ecology <i>or</i>	
Educ. 471—Sec. Educ. _____	5	N. S. 461—Nature in Calif. _____	3-4
Educ. 493—Methods _____	2	Zool. 430—Animal Physiology _____	4
* Botany electives _____	3-4	Educ. 493—Methods _____	2
Minor _____	2-3	* Zoology electives _____	3-4
		Minor _____	2-3

* Six to seven units are required from these elective groups.

** See "Note" on page 61.

GRADUATE YEAR

Educ. 443—Directed Teaching	3	Educ. 443—Directed Teaching	3
Educ. 444Y—Prob. in Sec. Tchng.	1	Educ. 444Z—Prob. in Sec. Tchng.	2
Educ. 480—Fund. Counsel and		Educ. 490—Audio-Visual	2
Guid.	2	Minor	3
Minor	3	Electives	3
Electives	5		

NOTE: When a student has completed lower division requirements plus a minimum of 24 units in upper division courses in the biological sciences, a B.A. degree in Biological Science will be awarded if all other graduation requirements have been met. The graduate year must include 6 units of minor courses in the 400 series.

General Secondary Teaching Minor in Biological Science

See also pages 142-145 for professional education requirements. A teaching major in a different teaching field is also required.

Lower Division

Botany 100—General Botany *or*

Microbiology 200—General Microbiology..... 5 units

* Zoology 100—General Zoology..... 5 units

† Mathematics 100—Basic Mathematical Analysis..... 4 units

Chemistry 101—General Chemistry..... 5 units

Upper Division

Biological Science Courses selected with the approval of adviser..... 7-8 units

26-27 units

MASTER OF ARTS DEGREE

The graduate program is built on a broad foundation of undergraduate preparation in the biological sciences and is primarily designed to provide an opportunity for secondary teachers to become more adequately trained. The program requires intensive directed study aimed at breadth of information and depth of understanding.

1. Prerequisite: Bachelor of arts degree in General Secondary Teaching in Life Science and General Science or the equivalent.

2. Area of concentration:

a. Biological Science 501..... 3 units

b. Biological Science 599..... 3 units

c. Electives chosen from "500" courses..... 6 units

3. Approved courses outside the field of biological sciences..... 6 units

4. Other courses approved in advance by an adviser..... 12 units

NOTE: The master's program in biological sciences is currently being revised. The student should formulate his program with the aid of an adviser.

COURSES OF INSTRUCTION

Anatomy

201 Structure of the Human Body (3) Fall, Spring

Prerequisite: Biology 153 or Zoology 100 recommended. Lectures, demonstrations and selected experiments illustrating the structural units of the human body including cell, tissue, organ and organ system relationship. Lecture two hours; laboratory three hours.

* Physical Education and Nursing Majors may substitute Anatomy 201—Structure of the Human Body (3) and Physiology 201—Introduction to Human Physiology (3) (total 6 units) for Zoology 100.

† May be satisfied by examination and/or four years of high school mathematics.

Biological Science

153 Principles of Biology I (3) (General Education) Fall, Spring

Selected topics in the biological sciences as applied to the understanding of basic and unifying principles; emphasis on biology of individual organisms. (No credit allowed for this course if student has received credit for a previous course in college biology, botany, or zoology.)

154 Principles of Biology II (3) (General Education) Fall, Spring

Prerequisite: Biology 153. Emphasis on biology of groups of organisms, heredity, evolution, and ecology.

410 Genetics (3) Fall, Spring

Prerequisites: Zoology 100, Botany 100, Mathematics 100, or equivalent. Principles of the genetics of animals and plants emphasizing the mechanisms of inheritance and the practical applications.

411 Heredity and Evolution (3) Fall

Prerequisite: Biological Science 410, or the equivalent. Organic evolution, with critical discussion of possible mechanisms involved.

420 Histological Methods (3) Fall

Prerequisite: Zoology 100, Botany 100, or the equivalent. Practical experience in preparing and staining various types of tissue sections. Lecture one hour; laboratory six hours.

421 Cytology (4) Fall

Prerequisites: Botany 100 and Zoology 100, or the equivalent. Chemistry 101 recommended. Study of cellular structure, organization, and reproduction. Lecture two hours; laboratory six hours.

460 General Ecology (4) Spring

Prerequisites: Botany 100 and Zoology 100, or equivalent and Chemistry 101. Study of the relation of plants and animals to their environment and to each other. Emphasizes environmental complexes, ecological life histories, relationships between individuals in populations and communities. Field work stresses local conditions. Lecture two hours; laboratory and/or field work six hours.

GRADUATE COURSES

501 Development of Biological Concepts (3)

Prerequisites: Graduate status with bachelor's training meeting requirements for the life science and general science teaching major. The great concepts in biological science, their development, their impact on human thought and activities, and their relation to present-day understandings.

510 Human Genetics (2)

Prerequisite: Biological Science 410 or equivalent. Problems, theories, and methods peculiar to human genetics; genetic counseling; inheritance

of such traits as disease entities, mental retardation, and biochemical factors. Lecture one hour; laboratory three hours.

597AB Research Problem (1-2)

Prerequisite: Admittance to candidacy for a master's degree in the area of Biological Science and consent of instructor.

599 Graduate Project (3) Fall, Spring

Conservation

354 Conservation of Natural Resources (3) (General Education)

Physical and biological factors involved in the depletion of natural resources of the United States, such as soil, water, minerals, and forests. The need for and application of conservation practices. (Not accepted for majors and minors in science.)

461 Conservation of Wildlife (3) Spring

Open only to qualified majors and minors in the biological and physical sciences. Basic environmental needs of wildlife, value of wildlife to humans, methods involved in conservation of this resource, current problems.

Nature Study

355 Natural Science and California Culture (3) (General Education)

Prerequisite: Biological Science 153 or equivalent. Environmental study orienting and enriching individuals in their relationships to their living and physical world; cultural and scientific resultants of the climate and terrain; far-ranging field studies. Lecture two hours; laboratory three hours.

366 Regional Excursions (1-4) Fall, Spring

Extended field excursions during vacation periods to various regions such as deserts, mountains, seashores of the United States, Canada, and Mexico for the study of the natural history of these regions. No prerequisites. Enrollment by permission of instructors only

367 Marine and Shore Life (3) Fall

Observation and study of life along bays, shores, and pools. Maintenance of small tanks of live specimens in the laboratory. Preparation and display of specimens. Lecture one hour; laboratory six hours, including Saturday.

381 Science Materials (3) Spring

Collection, preservation, manufacture, exhibit, and use of science materials, including the maintenance of living things. Lecture two hours; laboratory three hours.

461 Nature in California (3) Spring

Prerequisite: Course in biological science or Nature Study 355. Scientific acquaintance with birds, mammals, and native vegetation; laboratory study, field trips through Southern California. Lecture two hours; laboratory three hours; field trips to be arranged.

Physiology**201 Introduction to Human Physiology (3) Fall, Spring**

Prerequisite: Anatomy 201, Biology 153 or Zoology 100 recommended. Basic principles of the function of living things with special emphasis upon the human body. Lecture two hours; laboratory three hours.

BOTANY

(In the Division of Science and Mathematics)

STAFF: Griesel (Department Head), Caplin, Harvey, Sacher, Straw

BACHELOR'S DEGREE CURRICULUM

Major in Botany

The program in botany is designed to provide the student with a broad understanding of the basic plant sciences. Such training will qualify the student for (a) graduate study, (b) teaching in the area of biological sciences, especially at the junior college level, (c) applied botanical fields in civil service such as federal and state positions in park and forestry services, (d) applied botanical fields in private industry stressing horticulture and agriculture.

Lower Division

Botany 100—General Botany	5 units
Chemistry 101—General Chemistry	5 units
Mathematics 100—Basic Mathematical Analysis	4 units
Physics 101—Physics I	4 units
Physics 102—Physics II	4 units
Zoology 100—General Zoology	5 units

Upper Division

Biological Science 410—Genetics	3 units
Botany 420—Morphology of Nonvascular Plants <i>or</i>	
Botany 421—Morphology of Vascular Plants	4 units
Botany 422—Plant Anatomy	4 units
Botany 430—Plant Physiology	4 units
Botany 440—Plant Classification	4 units
Chemistry 308—Elementary Organic Chemistry	4 units
Three courses from the biological sciences selected with the approval of an adviser	9-12 units
	59 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR BOTANY MAJOR

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Bot. 100—Gen. Botany <i>or</i>		Bot. 100—Gen. Botany <i>or</i>	
Zool. 100—Gen. Zoology	5	Zool. 100—Gen. Zoology	5
Chem. 101—Gen. Chemistry	5	Math. 100—Basic Math. Analysis..	4
*Engl. 150—Written Expr. <i>or</i>		*Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3
Govt. 150—Govt. & Amer. Soc.	3	Art 150—Art, Music, Dance	3
		P.E. 150	1

* See "Note" on page 61.

SOPHOMORE YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Physics 101—Physics I	4	Physics 102—Physics II	4
Chem. 401A—Org. Chemistry	3	Hist. 250—U. S. History	3
Phil. 150—Phil. Ideas	3	Engl. 250—Understanding Lit.	3
Phys. Educ. elective	1	Psych. 150—Human Behavior.....	3
Gen. Educ. Soc. Sci. elective	3	Elective	3
Elective	2		

JUNIOR YEAR

Bot. 422—Plant Anatomy	4	Bot. 440—Plant Class.	4
H&S 350—Personal Health	2	Bot. 420—Vascular Plants <i>or</i>	4
Electives	9	Bot. 421—Nonvascular Plants	4
		Gen. Educ. elective	3
		Electives	4

SENIOR YEAR

Bot. 430 —Plant Physiology	4	Biol. Sci. electives	6-8
Bio. Sci. 410—Genetics	3	Gen. Educ. elective	3
Bio. Sci. elective	3-4	Electives	4-6
Electives	4-5		

COURSES OF INSTRUCTION

100 General Botany (5)

Introduction to the study of botany. Structure and function of vascular plants, principles of heredity and evolution of plants, and survey of nonvascular and vascular plants. Lecture three hours; laboratory six hours. Chemistry 101 recommended.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

401 Economic Plants (3) Spring

Prerequisite: Botany 100. Study of man's use of plants; origin of cultivated plants and their relation to human cultures.

420 Morphology of Nonvascular Plants (4) Spring 1960

Prerequisite: Botany 100. Life histories, structure, and evolutionary relationships of the principal orders of algae, fungi, and mosses. Lecture two hours; laboratory six hours.

421 Morphology of Vascular Plants (4) Spring 1961

Prerequisite: Botany 100. Comparative morphology and reproduction of ferns, fern allies, and seed plants. Lecture two hours; laboratory six hours.

422 Plant Anatomy (4) Fall

Prerequisite: Botany 100. Microscopic structure of vascular plants emphasis on the comparative structure and functioning of meristems structure and differentiation of cells and tissues; development and comparative anatomy of stem, leaf, and root. Lecture two hours; laboratory six hours.

425 Mycology (4) Fall

Prerequisite: Botany 100. Structure, development, physiology, and classification of representative genera and species of fungi, and the place of fungi in the world of life. Lecture two hours; laboratory six hours.

430 Plant Physiology (4) Fall

Prerequisite: Botany 100. Functions of plants; acquisition of raw materials and energy, manufacture of food and other substances, water relations, respiration, and growth. Lecture two hours; laboratory six hours.

440 Plant Classification (4) Spring

Prerequisite: Botany 100. Classification of flowering plants. Information about local native and cultivated plants of special value to the teacher of biology and nature study. Lecture two hours, laboratory and/or fieldwork six hours.

460 Plant Geography (3) Fall

Prerequisite: Botany 100. Botany 440 recommended. Flora of the world with emphasis on principles and problems of their development. Local flora and conditions stressed.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES**520 Plant Morphogenesis (2)**

Prerequisite: Consent of instructor. Factors of internal and external environment affecting growth and differentiation at cellular, organ, and organismal levels by study and correlation of contributions from fields of morphology, anatomy, cytology, and physiology. Emphasis on seed plants.

560 Plant Ecology (2) Spring

Bachelor's degree in botany, zoology, or biological sciences, including Biological Science 460 and Botany 440. Analysis of plant communities for descriptive, successional and evolutionary studies; interrelationships between different communities; and relationships among members of the community. Lecture one hour, laboratory and/or field work three hours.

BUSINESS ADMINISTRATION

(In the Division of Business and Economics)

STAFF: F. Simpson (Division Chairman), Allen, Allison, Bertram, Bray, Bright, Caplan, Chapin, Chen, Clark, Cobb, Codner, Courtney, Cox, DeReyna, Dodge, Fiekowsky, Flippo, Francis, Gustafson, Hanes, Hein, Hill, Horwich, Hoyt, Jenkins, Jester, Jones, McLaren, Mah, Massey, Mathy, Moore, Murphy, Nelson, Norby, Owens, Ray, Salemi, Scoles, Severance, W. Simpson, Sorrensen, Strogberg, Strom, Tipton, Tuohino, Voris, Whiting, Worley, Wu. Part-time: Ardon, Borders, Brown, Collins, Cook, Craig, Elliott, Gross, Hall, Horton, Knight, Koch, McClellan, O'Donnell, Rockley, Schmit, Stout, Weinhold, Wyett.

BACHELOR'S DEGREE CURRICULA

Two baccalaureate majors in business are offered:

- (1) Business Administration (B.S. degree)
- (2) Business Education (B.A. degree)

See page 60 for additional graduate requirements for B.S. degree.

I. Business Administration

All business administration majors must take a common core of lower and upper division courses. In addition, each student must select one of the following options: accounting; business-arts; business economics and statistics; finance; administrative, personnel, or production management; marketing; labor relations; office administration; real estate; special business; or insurance. A total of 128 units is required for the B.S. degree in business administration.

Lower Division Core Requirements †

Mathematics 240—Introductory Mathematical Analysis for Business	3 units
Business 200AB—Principles of Accounting	6 units
Business 205—Foundations of Business Law	3 units
Economics 201AB—Principles of Economics	6 units

Upper Division Core Requirements

a. To be completed in the junior year:

Business 300—Managerial Accounting (3)

Business 306—Production Management (3)

(Students taking office administration option will substitute Business 313—Office Organization and Management for Business 306.)

Business 309—Applied Business and Economics Statistics I (3)

Business 391—Quantitative Methods in Business and Economics (3)

Economics 303—Money, Banking and the Economy (3)

† Credit for Lower Division Courses in Business: Unit credit for course work carrying a business number taken in lower division will be granted toward any major foundation in business under the following conditions:

1. A maximum of 18 units (including two semesters of accounting and 3 units of business law in the lower division requirements) will be allowed, with the approval of the department head in that field, if a grade of "C" or higher was received.
2. In no case will more than 6 units or two semesters of course credit be allowed in any one field.
3. Unit credit so secured in no way reduces the number of upper division units to be taken in the Division of Business and Economics.

b. To be completed in the junior or senior year:

- Business 303—Business Finance (3)
- Business 304—Principles of Marketing (3)
- Business 305—Commercial Law (3)*
- Business 307—Manpower Relations in Business (3)
- Economics 310—Economics of the Business Firm (3)

c. All business majors are required to take a proficiency test in the use of business machines not later than the end of the second semester in residence. This requirement can be met by taking Business 212A (Business Machines), or by passing the machine-skill test given in Business 309.

OPTION 1—ACCOUNTING

Develops the technical and professional theories and procedures essential for the certified public accountant, the public accountant, the business accountant, the government accountant, or the teacher of accounting.

ADVISERS:

Bray, Chapin, Chen, Cobb, deReyna, Francis, Hein, Horwich, Jenkins, Jones, McLaren, Murphy, Owens, Ray, Tuohino.

Core requirements. See page 104.....	30 units
Business 320AB, 321, 420, 422, and 424A.....	18 units

OPTION 2—BUSINESS-ARTS

Meets the needs of firms desiring business graduates with less specialization. May also be used by students who wish a broader field of concentration at the undergraduate level. Couples the basic business sequence with liberal arts courses.

ADVISERS:

Caplan, Hoyt.

Core requirements. See page 104.....	30 units
English 306, Speech 411, Government 440, History 476.....	12 units†
Additional course selected with the prior approval of an adviser.....	3 units

OPTION 3—BUSINESS ECONOMICS AND STATISTICS

Equips the student with the major tools of quantitative analysis needed as a business statistician in the rapidly expanding research departments of business firms or as an executive assistant in moderate-sized and large firms.

ADVISER:

Moore.

Core requirements. See page 104.....	30 units
Business 409, Business 422, Economics 411, and either Business 446 or 467.....	12 units
Additional course selected with the prior approval of an adviser.....	3 units

* Students who have taken 6 semester units of business law in lower division are to take Business 480.

† May not be applied toward general education requirement of the college.

OPTION 4—FINANCE

Prepares the student to enter business as a trained worker in the finance department, or as a specialist in banking, insurance, and investments, or as a research analyst or budget specialist.

ADVISERS:

Clark, Cox, Hill, Nelson, Scoles.

Core requirements. See page 104.....	30 units
Business 332, Business 433, Business 434.....	9 units
Two additional courses selected with the prior approval of an adviser.....	6 units

OPTION 5—MANAGEMENT

Business management has been divided into three areas of concentration. The student may choose from among the following:

- (A) Administrative
- (B) Personnel
- (C) Production

A. Administrative

Develops skill in administrative and supervisory techniques which are required of managers, supervisors, and similar administrative officers in the fields of industry, finance, government, labor, etc.

ADVISERS:

Allison, Flippo, Hanes, Salemi, Whiting.

Core requirements. See page 104.....	30 units
Business 360, Business 434, Business 442, Business 461, and Business 477.....	15 units

B. Personnel

Develops skill in personnel relations that is required of managers, supervisors, conciliators, and similar officials in industry, finance, education and government.

ADVISERS:

Flippo, Salemi.

Core requirements. See page 104.....	30 units
Economics 302, Psychology 430, Sociology 446, Business 473, and Business 475.....	15 units

C. Production

Prepares students for factory employment in production management, production control, time and motion study, methods analysis, and related assignments.

ADVISERS:

Allison, Hanes, Voris.

Core requirements. See page 104.....	30 units
Business 360, Business 365, Business 463, Business 464, Business 467.....	15 units

OPTION 6—MARKETING AND TRANSPORTATION

Marketing is divided into a number of specialties. Students may choose from the following in the marketing and transportation option:

- (A) Advertising
- (B) International Marketing
- (C) Marketing Management and Research
- (D) Retailing
- (E) Transportation

A. Advertising

Prepares the student for a career in an advertising agency, an advertising department, or in public relations.

ADVISERS:

Allen, Codner, Courtney, Dodge.

Core requirements. See page 104.....	30 units
Business 340, 440, 445, and 446.....	12 units
Additional course selected with the prior approval of adviser.....	3 units

B. International Marketing

Prepares the student for employment with firms engaged in importing, exporting, or transportation.

ADVISER:

Codner.

Core requirements. See page 104.....	30 units
Business 343, 442, 447, and Economics 406.....	12 units
Additional course selected with the prior approval of adviser.....	3 units

C. Marketing Management and Research

Prepares the student for a career in sales, sales management, and marketing management or marketing research.

ADVISERS:

Allen, Codner, Courtney, Dodge.

Core requirements. See page 104.....	30 units
Business 340, 442, 443, and 446.....	12 units
Additional course selected with the prior approval of adviser.....	3 units

D. Retailing

Prepares the student for employment by retail institutions or to own and operate his own retail store.

ADVISER:

Courtney.

Core requirements. See page 104.....	30 units
Business 340, 341, 443, and 444.....	12 units
Additional course selected with the prior approval of adviser.....	3 units

E. Transportation

Prepares a student for a position in various types of transportation enterprises.

ADVISER:

Strom.

Core requirements. See page 104.....	30 units
Business 343, 444, 448, and 449.....	12 units
Additional course selected with prior approval of adviser.....	3 units

OPTION 7—OFFICE ADMINISTRATION**ADVISERS:**

Gustafson, Jester, Stroberg.

Prepares students for office positions of responsibility, including secretarial assistance to business executives. (Skill in shorthand and type-writing is required.)

Core requirements. See page 104.....	30 units
Business 212AB, 301, 310, and 311.....	12 units
Additional course selected with prior approval of adviser.....	3 units

OPTION 8—REAL ESTATE

Prepares students for entering the various areas of the real estate business or profession including brokerage and appraisal firms, lending institutions, and governmental agencies.

ADVISERS:

Caplan, Cox, Hill.

Core requirements. See page 104.....	30 units
Business 338, 381, 438, and 439.....	12 units
Additional course selected with the prior approval of an adviser.....	3 units

OPTION 9—SPECIAL BUSINESS

A flexible program designed for students with special and unique needs not covered by the other options. Permission to take this option must be secured from the chairman of the division.

ADVISER:

F. Simpson.

Core requirements. See page 104.....	30 units
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Fifteen units in business, economics, and relevant fields to be worked out in conference with the division chairman and appropriate faculty members, depending upon the *unique* and *special* objectives of the student.

OPTION 10—INSURANCE

Prepares students for entering various areas of insurance, home or branch office, general agencies or insurance departments of business

firms, and provides a foundation for those who seek state licenses as agents or brokers.

ADVISERS:

Hill, Nelson, Scoles.

Core requirements. See page 104.....	30 units
Business 335, 336, 435 and 436.....	12 units
Additional course selected with the prior approval of an adviser from Business 330 or 332.....	3 units

OPTION 11—LABOR RELATIONS

Develops skill in labor relations that is required of managers, supervisors, conciliators, and similar officials in industry, finance, education, government, or labor unions.

ADVISERS:

Norby, Bertram.

Core requirements. See page 104.....	30 units
Economics 302, Economics 420, Business 472, and Business 473.....	12 units
Additional course selected with the prior approval of adviser.....	3 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR BUSINESS ADMINISTRATION MAJOR

FRESHMAN YEAR

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
†Engl. 150—Written Expr. <i>or</i>		Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A.....	3	Lang. Arts 150B.....	3
Biol. Sci. 153—Prin. of Biology <i>or</i>		Biol. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151.....	3	Phys. Sci. 151.....	3
Govt. 150—Govt. and Amer. Soc.	3	Art 150—Art, Music, Dance.....	3
P.E. 150.....	1	Phys. Educ. elective.....	1
Psych. 150—Human Behavior.....	3	Philosophy 150—Philosophical Ideas	3
Elective.....	3	Elective.....	3

SOPHOMORE YEAR

Engl. 250—Understanding Lit.....	3	Hist. 250—U. S. History.....	3
Biol. Sci. 154 <i>or</i>		Econ. 201B—Prin. of Economics.....	3
Phys. Sci. 152.....	3	Bus. 200B—Prin. of Acctg.....	3
Bus. 200A—Prin. of Acctg.....	3	Bus. 205—Foundations of Bus. Law	3
Econ. 201A—Prin. of Economics.....	3	Math. 240—Intro. Math. Anal. for	
Elective.....	4	Bus.	3

JUNIOR YEAR

Bus. 309—Applied Bus. and Econ.		Econ. 303—Mon. Bank and Econ.....	3
Stat. I.	3	Option requirements.....	6
Bus. 300—Managerial Acctg.....	3	Bus. 306—Production	
Bus. 305—Law of Commerce.....	3	Management *.....	3
H. & S. 350—Personal Health.....	2	Bus. 391—Quan. Methods in Bus.	
Elective.....	5	and Econ.	3

* Office Administration majors take Business 303—Office Organization and Management in lieu of Business 306.

† See "Note" on page 61.

SENIOR YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Bus. 303—Business Finance.....	3	Econ. 310—Econ. Bus. Firm.....	3
Bus. 304—Prin. of Marketing.....	3	Option requirements	6
Bus. 307—Manpower Relations.....	3	General Education elective.....	3
Option requirements	3	Electives	4
Electives	4		

II. Business Education

ADVISERS:

Gustafson, Jester, Stroberg.

This major is designed to provide the student with a broad understanding of the scope, development, and philosophy of business education; to stimulate his interest in the teaching profession; and to prepare him for successful teaching of the various business subjects offered in the secondary schools. Students who wish to qualify for the bachelor of arts degree should complete the requirements listed below for the business education teaching major.

A. Six months of practical experience or 1,000 clock hours in a business occupation.

B. Twenty-five semester hours of work in subjects basic to business and commerce which must include each of the following courses or equivalents:

Economics 150—Economics for the Citizen (3)

Business 102AB—Typewriting (2-2)

Business 200AB—Principles of Accounting (3-3)

Business 205—Foundations of Business Law (3)

Business 113—Organization of American Business (3)

Business 301—Business Communications (3); or Business 140—Basic Mathematics for Business and Social Sciences (3); or Business 240—Introductory Mathematical Analysis for Business (3)

Geography 240—Economic Geography (3)

Business 304—Principles of Marketing (3); or salesmanship, retailing, or marketing taken in lower division.

C. Twenty semester hours of work in at least two of the following fields of concentration (a minimum of eight semester hours in each of the two fields, one of which must be accounting or secretarial training):

Accounting

Business 212A—Business Machines (2)

Business 320AB—Intermediate Accounting (3-3)

Electives:

Business 300—Managerial Accounting (3)

Business 321—Federal Tax Accounting I (3)

Business 420—Advanced Accounting (3)

Business 422—Cost Accounting I (3)

Secretarial Training

Business 212A—Business Machines (2)

*Business 310—Advanced Transcription Techniques (3)

†Business 311—Administrative Secretarial Procedures (3)

Electives:

Business 212B—Business Machines (1)

Business 301—Business Communications (3)

* Typing and shorthand skills are prerequisite to Business 310.

† Typing skill is prerequisite to Business 311.

Merchandising

- Business 304—Principles of Marketing (3)
- Business 340—Principles of Advertising (3)
- Business 341—Salesmanship (3)
- Business 442—Sales Management (3)
- Business 443—Problems in Retailing (3)

Business Management

- Business 303—Business Finance (3)
- Business 305—Commercial Law (3)
- Business 309—Applied Business and Economic Statistics I (3)
- Business 313—Office Organization and Management (3)
- Business 335—Insurance Principles (3)
- Business 338—Real Estate Principles (3)

NOTE: If any of the courses listed under "C" were taken as basic subjects under requirement "B," other courses under "C" must be substituted.

D. The scope and function of business education.

Education 491—Principles of Business Education (3)

All students in business education take this comprehensive course prior to methods and directed teaching. It may be taken concurrently with the *first* methods course in business education.

Special Secondary Teaching Major; General Secondary Teaching Major and Minor

The special secondary teaching credential authorizes the holder to teach in elementary and secondary schools subjects basic to business and commerce and, in addition, the fields of concentration named in the credential. The requirements for the general secondary teaching credential are the same as those for the special secondary credential except for the addition of a minor in a different teaching field and a graduate year including further professional education. The minor consists of a minimum of 20 units of work in business administration and secretarial subjects; 12 units must be in upper division, including 6 units in the same subject field, i.e., accounting, secretarial training, merchandising, or business management. See also pages 142-145 for professional education requirements.

NOTE: Candidates for the special or general secondary credential, either majors or minors, must have completed Education 491 and at least one Education 493 methods course in business education prior to enrolling in directed teaching.

SUGGESTED COURSE SEQUENCE FOR BUSINESS EDUCATION MAJOR WITH SPECIAL SECONDARY CREDENTIAL

FRESHMAN YEAR			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
†Engl. 150—Written Expr. <i>or</i> Lang. Arts 150A_____	3	†Sp. 150—Oral Expr. <i>or</i> Lang. Arts 150B_____	3
Biol. Sci. 153—Prin. of Biology <i>or</i> Phys. Sci. 151_____	3	Biol. Sci. 153—Prin. of Biology <i>or</i> Phys. Sci. 151_____	3
Govt. 150—Govt. and Amer. Soc._____	3	Art 150—Art, Music, Dance_____	3
P.E. 150—Phys. Educ._____	1	Phys. Educ. elective_____	1
Econ. 150—Econ. for the Citizen_____	3	Bus. 113—Org. of Amer. Bus._____	3
Bus. 102A—Typewriting_____	2	Bus. 102B—Typewriting_____	2

SOPHOMORE YEAR			
Phil. 150—Phil. Ideas_____	3	Engl. 250—Understanding Lit. _____	3
Biol. Sci. 154—Prin. of Biology <i>or</i> Phys. Sci. 152_____	3	Hist. 250—U. S. History_____	3
Psych. 150—Human Behavior_____	3	Geog. 240—Economic Geog. _____	3
Bus. 200A—Prin. of Acctg._____	3	Bus. 212B—Business Machines_____	1
Bus. 212A—Business Machines_____	2	Bus. 200B—Prin. of Acctg._____	3
Bus. 103A—Shorthand (3) (for Sec. majors) <i>or</i>		Bus. 205—Found. of Bus. Law_____	3
Elective_____	1	Bus. 103B—Shorthand (3) (for Sec. majors)	

JUNIOR YEAR			
H.&S. 350—Personal Health_____	2	Educ. 471—Secondary Educ. _____	5
Gen. Educ. elective_____	3	Educ. 491—Prin. of Bus. Educ._____	3
Educ. 413—Psych. and Soc._____	5	Bus. 301—Bus. Communications_____	3
Bus. 304—Prin. of Mktg._____	3	Bus. 311—Admin. Sec. Proced. <i>or</i> Bus. 320B—Intermed. Acctg._____	3
Bus. 310—Adv. Trans. Tech. <i>or</i> Bus. 320A—Intermed. Acctg._____	3	Educ. 493—Methods_____	2
Educ. 300—Intro. Cred. Prog._____	N. Cr.		

SENIOR YEAR			
Educ. 443Y—Directed Teaching_____	3	Educ. 443Z—Directed Teaching_____	3
Educ. 444Y—Prob. in Sec. Tchng._____	1	Educ. 444Z—Prob. in Sec. Tchng._____	2
Educ. 493—Methods_____	2	Educ. 490—Audio-Visual_____	2
Bus. 313—Office Org. and Mgmt._____	3	*Approved Business electives_____	6
*Approved Business electives_____	6	Electives_____	3

SUGGESTED COURSE SEQUENCE FOR BUSINESS EDUCATION MAJOR WITH GENERAL SECONDARY CREDENTIAL

FRESHMAN YEAR			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
†Engl. 150—Written Expr. <i>or</i> Lang. Arts 150A_____	3	†Sp. 150—Oral Expr. <i>or</i> Lang. Arts 150B_____	3
Biol. Sci. 153—Prin. of Biology <i>or</i> Phys. Sci. 151_____	3	Biol. Sci. 153—Prin. of Biology <i>or</i> Phys. Sci. 151_____	3
Govt. 150—Govt. and Amer. Soc._____	3	Art 150—Art, Music, Dance_____	3
Phys. Educ. 150_____	1	Phys. Educ. elective_____	1
Econ. 150—Econ. for the Citizen_____	3	Bus. 113—Org. of Amer. Bus._____	3
Bus. 102A—Typewriting_____	2	Bus. 102B—Typewriting_____	2

* Students concentrating in the Merchandising field choose 9 units from: Bus. 340, 341, 442, 443; students concentrating in Business Management field choose 9 units from: Bus. 303, 305, 309, 335, 338.

† See "Note" on page 61.

SOPHOMORE YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Phil. 150—Phil. Ideas	3	Engl. 250—Understanding Lit.	3
Biol. Sci. 154—Prin. of Biology <i>or</i> Phys. Sci. 152	3	Hist. 250—U. S. History	3
Psych. 150—Human Behavior	3	Geog. 240—Economic Geog.	3
Bus. 200A—Prin. of Acctg.	3	Bus. 212B—Business Machines	1
Bus. 212A—Bus. Machines	2	Bus. 200B—Prin. of Acctg.	3
Bus. 103A—Shorthand (3) (for Sec. majors) <i>or</i>		Bus. 205—Found. of Bus. Law	3
Elective	1	Bus. 103B—Shorthand (3) (for Sec. majors)	

JUNIOR YEAR

H.&S. 350—Personal Health	2	Gen. Educ. elective	3
Bus. 310—Adv. Trans. Tech. <i>or</i> Bus. 320A—Intermed. Acctg.	3	Educ. 413—Psych. and Soc.	5
Bus. 301—Bus. Communications	3	Bus. 311—Admin. Sec. Proced. <i>or</i> Bus. 320B—Intermed. Acctg.	3
Bus. 304—Prin. of Mktg.	3	Bus. 313—Office Org. and Mgmt.	3
Elective	1	Minor	2
Educ. 300—Intro. Cred. Prog.	N. Cr.		
Minor	3		

SENIOR YEAR

Educ. 471—Secondary Educ.	5	Educ. 493B—Methods (Major)	2
Educ. 491—Prin. of Bus. Educ.	3	Educ. 493—Methods (Minor)	2
* Approved Business elective	3	Elective	3
Minor	5	Minor	9

GRADUATE YEAR

Educ. 442Y—Directed Teaching (minor)	3	Educ. 442Z—Directed Teaching (major)	3
Educ. 444Y—Prob. in Sec. Tchng.	1	Educ. 444Z—Prob. in Sec. Tchng.	2
Educ. 490—Audio-Visual	2	Educ. 480—Fund. Counsel. & Guid.	2
* Approved Bus. electives	6	Electives	9
Minor	3		

SUGGESTED COURSES FOR BUSINESS EDUCATION MINOR

Lower Division

- †Business 102AB—Typewriting (2-2)
- Business 103AB—Shorthand (Gregg) (3-3)
- Business 113—Organization of American Business (3)
- †Business 200 AB—Principles of Accounting (3-3)
- †Business 212A—Business Machines (2); Business 212B—Business Machines (1)

Upper Division

- Business 320AB—Intermediate Accounting (3-3)
- Business 301—Business Communications (3)
- Business 303—Business Finance (3)
- Business 310—Advanced Transcription Techniques (3)
- Business 311—Administrative Secretarial Procedures (3)
- Business 313—Office Organization and Management (3)

NOTE: Those students who have completed requirements for the special or general secondary major at another institution must complete at least seven units in business education courses, including one methods course, at Los Angeles State College before they may expect to obtain the department's recommendation for directed teaching.

* Students concentrating in the Merchandising field choose 9 units from: Bus. 340, 341, 442, 443; students concentrating in Business Management field choose 9 units from: Bus. 303, 305, 309, 335, 338.

† A minimum of one course in each is required.

MASTER OF SCIENCE DEGREE

Prerequisite for pursuing the master's degree: An undergraduate degree in business administration or economics from an accredited college or university. Students not meeting this prerequisite are required to take courses in Business Administration and Economics to remove these deficiencies before being admitted to the graduate program.

1. Core courses:

- (a) Business 501
Administrative Practices and Human Relations—3 units.
- (b) Business 502
Economic Analysis and Business Operations—3 units.
- (c) Business 503
Quantitative Approach to Managerial Decisions—3 units.

2. Graduate Thesis. Business 599AB (1-2 units)

3. Additional work selected in conference with the graduate adviser to meet the occupational objectives of the student in the field of accounting, finance, management, marketing, or business economics. 18 units. At least 6 units of these electives must be courses open only to graduate students.

4. Directed field experience or field study. 6 units. (This requirement may be waived for students with adequate prior experience in the occupational field. The adequacy of this prior experience will be determined by the department.)

COURSES OF INSTRUCTION

Business courses are numbered as follows:

Lower Division

101 to 212

Upper Division

Business Education and Office Administration 301, 310, 311, 313.

Accounting 320-329; 420-429.

Finance 330-339; 430-439.

Marketing 340-349; 440-449.

Management 360-369; 460-469.

Labor Relations and Personnel 370-379; 470-479.

Law 380-389, 480-489.

General

Business 490-499.

Graduate

Courses 500-599.

102AB Typewriting (2-2) Fall, Spring

Emphasis on correct typewriting techniques; skill improvement in speed and accuracy; tabulating and problem solving; business letters, business forms, manuscripts, and office reports. Class meets five hours a week.

103AB Shorthand (3-3) Fall, Spring

Ability to apply basic principles of Gregg shorthand to an extensive shorthand vocabulary; emphasis on speed and accuracy in reading and writing shorthand; development of skill in producing mailable typed manuscripts, business letters, and articles. Class meets five hours a week.

113 Organization of American Business (3) Fall, Spring

Scope, function, and organization of modern business; fundamental concepts, principles, and current practices in the major areas of business activity. (Open to all students except majors in Business Administration and Economics.)

200A Principles of Accounting (3) Fall, Spring

Simple transactions, general ledger accounts, books of original entry, the closing process, trial balances, financial statements, controlling accounts, adjusting entries, and the voucher system.

200B Principles of Accounting (3) Fall, Spring

Prerequisite: Business 200A. Problems of current and fixed assets, inventory accounting, manufacturing operations, departmental accounts, branch accounts, installment sales, consignments, and analysis of financial statements.

205 Foundations of Business Law (3) Fall, Spring

Prerequisite: Sophomore standing. Origin, development, growth, and functions of common law and mercantile law; modern application thereof. Courts and court procedure. Government and commercial law. Law of contracts as a foundation of commercial law.

300 Managerial Accounting (3) Fall, Spring

Prerequisite: One year of accounting or Business 200AB. Applied course in accounting. Emphasis on use of accounting information in business decisions, the application of accounting techniques to business operation and control, and accounting for personal use.

301 Business Communications (3) Fall, Spring

Prerequisite: Skill in typewriting. Training in composition of business letters; modern trends in business correspondence; problems of management which arise in connection with correspondence; evaluation of letters from representative firms. Practice in dictation of correspondence; writing of various forms of business letters and business reports.

303 Business Finance (3) Fall, Spring

Prerequisite: Three units of accounting. Alternative forms of business organization; financial principles and practices related thereto; administration and dissolution of private business corporations; financial promotion, types of securities, expansion, consolidation, merger, and reorganization. Sources and uses of financial information.

304 Principles of Marketing (3) Fall, Spring

The organization and principal operating aspects of our system for distributing goods and services. Retail and wholesale distribution channels, consumer buying characteristics, pricing, marketing of industrial products, particularly purchasing and selling problems involved in industrial marketing and co-operative marketing of agricultural products. Sources and uses of marketing information.

305 Business Law (3) Fall, Spring

Prerequisite: Three semester units of Business Law. Agency, copartnership, corporations, sales, and credit instruments; rights, duties and obligations arising out of relationship and business aspects thereof. Formation, operation, and termination of such relationships; law of commercial paper; bankruptcy; insolvency.

306 Production Management (3) Fall, Spring

Methods of factory management, including plant layout, stores, tool, equipment, quality and production control. Cases and problems are utilized extensively.

307 Manpower Relations in Business (3) Fall, Spring

Analysis of the formal and informal relationships in the business environment. Concentration upon problems of integrating individuals and groups into an effective organizational framework.

309 Applied Business and Economic Statistics I (3) Fall, Spring

Prerequisite: Mathematics 240 or equivalent. Statistical methods most used by business. Graphic and tabular presentation of data; variation; sampling theory with applications to marketing and industrial problems; business index numbers; time series analysis; trend, seasonal and business cycles, forecasting; simple correlation. Class meets five hours a week.

**391 Quantitative Methods in Business and Economics (3)
Fall, Spring**

Prerequisite: Business 309 or equivalent. Introduction to a variety of optimization techniques used in business administration. Elements of quantitative decision theory applied to business problems. Annuities, with special application to interest cost of capital investments. Class meets five hours a week.

409 Applied Business and Economic Statistics II (3) Fall

Prerequisite: Business 309. Analysis of variance; multiple and partial correlation; recent advances in time-series analysis. Techniques of sample survey construction: stratification, multistage sampling, optimum allocation of resources. Estimates of various population characteristics from such samples.

OFFICE ADMINISTRATION**212AB Business Machines (2-1) Fall, Spring**

Application and supervision of effective procedures related to the service functions of the modern office. Includes operation of various types of office computing, duplicating, and transcribing equipment. Courses may be taken concurrently, separately, and in either order. (Business 212A meets four hours a week; fulfills business machines proficiency requirement for business administration majors, and credential requirement for business education majors and minors.) Prerequisite for 212B only: Typing skill of 50 words a minute.

310 Advanced Transcription Techniques (3)

Prerequisites: Typing skill of 60 words a minute; shorthand skill of 90 words a minute. Stenographic office problems; development of transcription techniques; measurement of transcription skill. Emphasis on skill, knowledge, requirements, and standards for efficient stenographic procedures. Class meets four hours a week.

311 Administrative Secretarial Procedures (3)

Prerequisite: Skills in typewriting. Develops secretarial techniques at a high professional level. The scope of a secretarial career; secretarial duties and responsibilities; effective office relations. Emphasis on office administration, correspondence, records organization and supervision; work simplification; legal records and business reports. Class meets four hours a week.

313 Office Organization and Management (3) Fall, Spring

Relation of the office to the business or industry; office organization, management, and functions; methods used in selecting and training office personnel; office layout and work flow; selection and care of equipment and supplies; simplification of systems and procedures; forms design and control. Case studies and field trips.

ACCOUNTING

320A Intermediate Accounting (3) Fall, Spring

Prerequisite: Business 200AB. Accounting theory, practice and problems relating to current assets, current liabilities and stockholders' equity.

320B Intermediate Accounting (3) Fall, Spring

Prerequisite: Business 320A. Accounting theory, practice and problems relating to noncurrent assets and noncurrent liabilities. Various analyses of financial statements. Contemporary accounting problems.

321 Federal Tax Accounting I (3) Fall, Spring

Prerequisite: Three semesters of accounting. Statutes, regulations, administrative rulings, and court decisions relative to the income taxes of individuals. Preparation of tax returns.

326 CPA Law Problems and Auditing (3) Spring

Prerequisites: Senior or graduate standing and consent of instructor. Intensive survey of law subjects, auditing standards and procedures covered by the CPA examination. Review of past CPA examination questions.

328 CPA Problems and Theory of Accounts I (3) Fall

Prerequisites: Senior or graduate standing and consent of instructor. Intensive survey of nonspecialized accounting problems and theory of CPA examination calibre. Review of past CPA examination problems and questions.

329 CPA Problems and Theory of Accounts II (3) Spring

Prerequisites: Senior or graduate standing and consent of instructor. Intensive survey of specialized accounting problems and theory of CPA examination calibre. Review of past CPA examination problems and questions.

420 Advanced Accounting (3) Fall, Spring

Prerequisite: Business 320AB. Advanced theory and accounting problems concerning partnerships, ventures, insurance, statement of affairs, receivership, branch accounts, foreign exchange, and estate accounting.

421 Federal Tax Accounting II (3) Fall, Spring

Prerequisite: Business 321. The statutes, regulations, administrative rulings, and court decisions relative to income taxes of partnerships and corporations. Preparation of tax returns.

422 Cost Accounting I (3) Fall, Spring

Prerequisite: Three semesters of accounting. Manufacturing accounting theory, problems, records and financial statements. Elements of job-order and process cost accounting. Special emphasis on managerial use of cost data.

423 Cost Accounting II (3) Fall (Offered 1962-63)

Prerequisite: Business 422. Theory and problems of the major types of cost systems in general use; emphasis on the development of standards for cost control.

424A Auditing I (3) Fall, Spring

Prerequisite: Business 320AB. Introduction to the theory and techniques of auditing. Audit programs, evidence and working papers. Elements of internal control, including the function of internal auditing. Verification of financial statements by the CPA.

424B Auditing II (3) Spring

Prerequisite: Business 424A. Verification of individual balance sheet and income statement accounts by the independent CPA. Application of statistics to audit sampling. Preparation of audit and accounting reports.

425 Corporation Accounting (2) Spring

Prerequisite: Business 420. Incorporation requirements affecting accounting procedure, corporate reports, mergers, amalgamations and consolidations, holding companies; principles underlying and preparation of consolidated balance sheets and income statements. CPA examination problems relative to corporations.

427 Municipal and Governmental Accounting (2) Fall

Prerequisite: Business 320AB. Accounting theory and problems of governmental and institutional units. Budgeting, tax levies, appropriations. Accounting for revenues and expenditures of various funds. Preparation of related financial statements.

428 (491) Accounting Systems (2) Fall

Prerequisites: Successful completion of 18 units of accounting and consent of instructor. Techniques involved in co-ordination, design, installation, and control of accounting systems. Special emphasis on the study of existing systems, and analysis of a business organization to determine its particular requirements for a system. Installation of a system in local industry under instructor supervision is required of each student.

429 (493) Problems of the Controller (3) Spring

Prerequisites: Senior or graduate standing and consent of instructor. Survey of the responsibilities of the chief accounting officer. Accounting control of operations, effective methods of presenting accounting reports, and proper administration of the controller's department. Case studies.

FINANCE, REAL ESTATE AND INSURANCE**330 Credits and Collections (3) Fall**

Business and social functions of credit; classifications of credit and credit instruments; investigation and analysis of credit risks; management and control of credit-collection processes.

332 Investments (3) Fall, Spring

Prerequisite: Business 303. Principles of investment, survey of corporate securities, basic risks of investment, individual and institutional programs, principles of investment analysis, and selection of stocks and bonds.

335 Insurance Principles (3) Fall, Spring

Insurance as an economic and business institution. Survey of fire, marine, casualty, and life insurance for those interested as potential consumers or as a career.

336 Property Insurance (3) Fall

Prerequisite: Business 335 or consent of instructor. Practices and principles of fire, ocean and inland marine, and related property insurance lines.

338 Real Estate Principles (3) Fall, Spring

Introduction to the economics of land ownership and use. Fundamentals of ownership, financing, appraisal, management and transfer of residential and other real property.

339 Real Estate Practice (3) Fall

Prerequisite: Business 338 or consent of instructor. Procedures, methods, standards, and ethics of the real estate business; emphasis upon the function of the broker and real estate selling.

431 Business Fluctuations and Forecasting (3) Fall, Spring

See Economics 435.

433 Budgeting (3) Fall, Spring

Prerequisites: Business 300 and 303. Modern practices and techniques involved in the formulation, enactment, and administration of the budget; relation of budget practices to accounting and scientific management in business and government; preparing the budget; sources for estimates; relation of performance to estimates; analysis and reports for budgetary control.

434 Financial Management (3) Fall, Spring

Prerequisites: Economics 303 and Business 303. Processes of procurement and disposition of the resources of business and financial institutions. Case problems in financing of industrials, utilities and railroads. Management of the funds of banks and other financial institutions.

435 Life Insurance (3) Spring (Offered 1962-63)

Economic and personal significance of life insurance; types of policies, contracts, premium determination, and reserves; insurance as an investment; group life, health and accident insurance.

436 Casualty Insurance (3) Spring

Prerequisite: Business 335 or consent of instructor. Practices and principles of workmen's compensation, liability insurance and other casualty lines.

437 Investment Analysis (3) Spring

Prerequisite: Business 332 or consent of instructor. Investment practice problems in analysis of financial statements; selection and valuation of stocks and fixed-income securities; stockholder-management relations; applied security analysis.

438 Real Estate Valuation (3) Fall, Spring

Prerequisite: Business 338 or consent of instructor. Determining real property values; purposes of appraisals; analysis of factors involved and their relationship to trends in property values; current appraisal theory

439 Real Estate Finance (3) Spring

Prerequisite: Business 338 or consent of instructor. Position of real estate finance in the economy. Techniques and procedures used in financing real property, including sources of funds, lending policies, and instruments used in California today.

MARKETING

340 Principles of Advertising (3) Fall

Prerequisite: Business 304 or consent of instructor. What advertising is and what it is used for; its marketing and economic functions; advertising media, copy, layout, research. Printing and production processes; the organization of advertising departments and advertising agencies.

341 Salesmanship (3) Fall, Spring

Prerequisite: Business 304 or consent of instructor. Development and practical application of sales techniques in selected fields. Work of the

salesman, including customer relationships, home office relationships, the evaluation of sales opportunities, and development of the sales canvass. Includes cases, discussions, demonstrations, and oral participation in sales presentations.

343 Principles of Transportation (3) Fall

Economic significance of rail, bus, truck, air, and inland waterway transportation. Problems of rate structures, regulation and finance of the transportation systems. Special emphasis on rail transport.

344 (443) Principles of Retailing (3) Fall

Study of the nature and importance of retailing. Functions of buying, stock planning, inventory control, markup, accounting for stock control, pricing, style merchandising, advertising, and personnel. Stress is placed on store location, store layout, departmentization and management control.

440 Advanced Advertising (3) Spring (Offered 1962-63)

Prerequisite: Business 340 or consent of instructor. Preparation of advertisements for newspapers, magazines, and other printed media; effective advertising appeals, basic elements of good advertising for business concerns, headlines, slogans, etc. Importance of layouts, production and advertising budgets.

441 Industrial Marketing (3) Spring

Prerequisite: Business 304. Analysis of various types of industrial goods and markets for them; product planning and development; marketing research; determination of marketing channels; pricing policies; advertising; personal selling; cost distribution; selling to various governmental agencies.

442 Sales Management (3) Spring

Activities and organization of the sales department. Methods employed by sales managers in selecting, training, and supervising salesmen; selling methods, materials, and campaigns; distribution channels and territories; pricing, budgets, controls, and sales research. Lectures, cases, discussions, guest speakers, and exhibits.

443 Problems in Retailing (3) Spring

Problems of management of a retail store. Problem and case approach; interrelationship of major elements of retailing, buying, pricing, stock control, planned stocks, merchandising, control, including expense accounting and financial management.

444 Wholesaling (3) Spring

Prerequisite: Business 341 or consent of instructor. Economics aspects of wholesaling, its growth and trends, especially since World War II, wholesaling functions in fields of agriculture, consumers goods, industrial goods, etc. The status of wholesaling in domestic and foreign trade; techniques and methods of order handling, warehousing, and stock con-

trol, credit management, wholesaling co-operatives, and governmental regulations. Wholesale customer relationships.

445 Public Relations Methods for Business (3) Spring
(Offered 1961-62)

Prerequisite: Business 304 or consent of instructor. Public relations policies and techniques for business enterprises; development of good relationships with customer, employee, stockholder, government, and general public; importance of honesty and fairness in all public dealings; the place of research, advertising, sales promotion and publicity in public relations programs; uses of specific media.

446 Marketing Research Problems (3) Spring

Prerequisites: Business 309 and prior or current registration in Business 442 or consent of instructor. Practical sales and research problems with field investigations and reports covering application of the scientific method to the solution of sales problems. Problem analysis, collection of information from field observation, surveys, sales records, and secondary sources; the analysis and interpretation of data, and the preparation of reports.

447 Foreign Trade Practices (3) Fall (Offered 1962-63)

Prerequisite: Business 304. Techniques of foreign trade; exchange of goods; declarations; quotations; packing; shipping.

448 Traffic Management (3) Spring (Offered 1962-63)

Prerequisite: Business 343. Principles and practices of industrial traffic management including organization and operation of the traffic department, shipping documents, rate analysis and rate adjustment procedure, routing, tracing, expediting tariff supervision claims and claim prevention, procedure before regulatory commissions, traffic management and foreign trade, and traffic research.

449 Motor Transportation Practices (3) Fall (Offered 1962-63)

Prerequisite: Business 343 or consent of instructor. Intensive survey of motor carrier practices. Emphasis on both inter- and intra-city motor transportation problems, including the packaging of goods for shipment and warehousing.

See also Economics 406, Principles of International Trade.

MANAGEMENT

360 Case Studies in Business Management (3) Fall, Spring

Prerequisite: Business 306 or equivalent. Detailed case studies of the techniques of factory management, factory organization, departmentation and its criteria. Problems of middle supervisory levels; authority and accountability; relationships of staff to line. Concepts of production planning.

362 Industrial Equipment and Processes (3) Fall, Spring

Prerequisite: Business 306 or consent of instructor. Physical aspects of industry, as distinguished from organizational and managerial aspects. Characteristics of general purpose machine tools and other industrial machinery; processes such as casting, forging, heat treating and welding. Characteristics of important materials of manufacture; the relation of equipment and operation to product. Background in physics and chemistry helpful, but not required.

365 Industrial Purchasing (3) Fall

Prerequisites: Business 306 and 308. Problems of purchasing raw materials, fabricated parts, standard supplies, machinery and industrial equipment. Quality control of purchases, industrial specifications and inspection. Analysis of economic purchase lots; quantitative determination of minimum lots; order points, competitive quotations and purchase contracts. Purchasing procedure and purchase record control. Government purchasing procedures.

369 Applications of Industrial Management (3) Fall

Prerequisite: Business 360. Detailed analysis, by field survey and conference methods, of selected manufacturing plants. Preparation of analytical reports emphasizing problems of production and their relationship to finance and marketing. The interdependence of all parts of the organization and the need for unified management thinking.

371 (471) Supervision: Principles and Problems (3) Fall, Spring

Prerequisite: Business 360 or consent of instructor. Supervisory methods and techniques of management; employer-employee relationships. Selection and maintenance of the working force and adjustment of the worker to the job. Problems of upgrading and supervisory training. Supervisory aspects of grievance procedure, conference and committee techniques.

461 Executive Control and Administration (3) Fall, Spring

Prerequisites: Business 306 and 360. Use of the case method to acquaint the student with major executive responsibilities and problems in various industries. Diagnosis of current problems and formulation of sound administrative policies and practices, requiring a consideration of sales, production, finance, and personnel factors.

463 Motion and Time Study (3) Spring

Prerequisites: Business 306, 309, and 360. Motion economy and elements of quantitative scientific management. Operation analysis, flow process charts, the division of activity into its normal elements. Time study procedures from raw data to final rating. Standardization, rating, and delay and fatigue influences; introduction to methods-time measurement. Written reports of time and motion economy analysis.

464 Production and Material Control (3) Spring

Prerequisites: Business 306 and 360 or equivalent. Production planning and budgeting; development of the production control system, including

product development, materials control, plant and equipment analysis, production standards and methods, personnel and supervision; control of production quantity and quality, measurement of production efficiency.

465 Case Studies in Purchasing (3) Spring

Prerequisite: Business 365. Application of purchasing principles to specific, practical situations. Study and analysis of the experiences of business firms for the purpose of clarifying principles concerning the organization of purchasing departments; relationship with other departments; manufacturing versus buying; negotiation with suppliers; costs; quality.

467 Quality Control (3) Spring

Prerequisite: Business 309 or equivalent. Control of quality of manufactured products by statistical methods. Control charts for variables, fraction defective, defects per unit. Acceptance sampling; single, double, and multiple sampling methods; sampling tables.

468 Small Business Management (3) Spring

Prerequisite: Majority of core courses completed or consent of instructor. Application of management principles to small enterprise. Use of case method to study location, records, purchasing, labor relations, organization, control, unit expansion, financial problems and cause of failure, relation to the economy, and taxation. Emphasis on practical aspects of operation by examination of specific cases.

472 Labor Relations and Collective Bargaining (3) Spring

Prerequisite: Economics 302. Relations between employers and employees as the latter are represented by organized labor. Collective bargaining as it relates to recognition, wages, hours, working conditions, grievance procedure, seniority, health and safety, etc., and the impact of the law upon these.

473 Personnel Management (3) Fall, Spring

Prerequisite: Business 306, or consent of instructor. Principles, methods, and procedures related to effective utilization of human resources in organizations. Historical development and objectives of personnel management, individual differences, labor budgeting, job analysis, recruitment, selection, placement, training, wage, and salary administration, hours of work, and employee health.

474 Wage and Salary Administration (3) Spring

Prerequisite: Business 473. Theory and practices of wage and salary administration: job analysis and preparation of job descriptions, use of job evaluation scales, establishment of the pay system, performance appraisal, and additional compensation techniques.

475 Cases in Personnel Management (3) Spring

Prerequisite. Business 473, courses in Psychology, Sociology, and Labor Economics desirable. Application of principles and methods of personnel management to specific cases, with a view to developing pro-

iciency in dealing with issues in personnel procurement, development, compensation, integration, and maintenance.

477 Business Policy (3) Fall, Spring

Prerequisite: Second semester seniors only. Integration of principles and policies of business management from the fields of accounting, economics, marketing, finance, statistics, and management in the solution of broad company problems and in the establishment of company policy. Emphasis on interaction of disciplines in efficient administration of a business.

See also Economics 420, Labor Legislation.

479 Printing Plant Management (3) Spring (Offered 1962-63)

Prerequisite: Senior standing in the printing management major. Organization and management of all departments in the printing plant, including the application of industrial management factors to the various departments. Inspection trips to study production methods and organization of local printing plants.

LAW AND GOVERNMENT REGULATION

381 Real Estate Law (3) Fall, Spring

Prerequisites: Business 338 and three units of business law or consent of instructor. Legal and business aspects of real property ownership and management. Emphasis on California law affecting escrows, contracts, licensing, brokerage, co-ownership, deeds and conveyances, trust deeds and mortgages, acquisition of titles, encumbrances, estates in land, leases and rentals.

480 Advanced Business Law (3) Spring

Prerequisite: Business 308 or six units of business law. Nature and sources of business law. Emphasis on financial transactions; negotiable instruments, security transactions, liens, chattel mortgages, trust receipts, shipping documents, corporate resolutions, business tax law, law of competition, legal collection of claims, insolvency and bankruptcy.

485 Business and Government (3) Fall (Offered 1962-63)

Significant points of contact between business and government; the necessity for thoroughly understanding everyday relationships with public authority; analysis of antitrust laws, fair trade laws, and unfair trade practices.

See also Economics 405, Economics of Public Utilities.

GENERAL BUSINESS

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

494 Electronic Systems and Equipment (3) Fall, Spring

Prerequisite: Senior or graduate standing or consent of instructor. Recent developments in electronic computers, and the application of these computers for accounting control. Types of computer systems. Administrative problems experienced in the selection and installation of computers. Scientific computation of accounting data. The auditor and electronic data. Case studies.

495 Electronic Data Processing for Business (3) Fall, Spring

Prerequisites: Senior or graduate standing, Business 494, or consent of instructor. Problems of programming, scheduling and feedback of accounting data under an integrated electronic system. Programming typical clerical operations. The role of operations research. Case studies.

496 Operations Research (3) Fall

Prerequisite: Business 360 or permission of instructor. Evaluation and application of linear programming and operations analysis as a tool for management decision making at the top executive level.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES**501 Administrative Practices and Human Relation (3) Fall, Spring**

Prerequisite: Business 306 or 360. Case studies of human relations problems confronting business administrators. Concepts which can be used to solve the problems confronting the individual in leading people or participating in group actions.

502 Economic Analysis and Business Operations (3) Fall, Spring

Prerequisite: Economics 310. Provision for utilizing the tools, concepts, and factual data of the economist in specific problems of business operations. Application of principles, analytical tools, and sources of economic information to practical business situations by means of the case method.

503 Quantitative Approach to Managerial Decisions (3) Fall, Spring

Prerequisites: Business 200AB and 309. Business 300 recommended. Use of quantitative information provided from accounting and statistical sources in arriving at solutions to complex business problems. Construction and application of controls over financial, manufacturing, and distributive activities. Quantitative method applied to problems of alternative choices of investment. Emphasis on recognition and definition of problem, where and how to get information, and how to organize, synthesize, and interpret information.

520 Seminar in Accounting Theory and Analysis (3) Fall

Prerequisite: Consent of instructor. Advanced phases of accounting as applied to modern business practice; the background and place of accounting in society and the economy; current developments in accounting theory and techniques.

521 Seminar in Accounting Theory and Analysis (3) Spring

Prerequisite: Consent of instructor. Advanced theoretical concepts implicit in contemporary accounting practice and current developments in accounting theory and techniques. Specific applications to major aspects of financial statements.

522 Advanced Income Tax Problems and Procedures (3) Fall

Prerequisites: Business 321 and 421. Application of research techniques to actual tax situations pertaining to individuals, partnerships, corporations, estates and trusts. Settlement of tax cases with government auditors. Place of litigation in tax planning. Rationale of income tax law. Case studies.

530 Business Finance Seminar (3) Spring

Prerequisite: Business 434. The business corporation in the American economy. National patterns of sources and distribution of business assets. Effects of public problems on financial decisions of business. Relationship of business decisions and the national economy.

531 Financial Institutions Seminar (3) Fall

Prerequisite: Business 434. The role of financial institutions in the United States. Financial management of savings and loan companies, life insurance companies, commercial banks, and other financial institutions, against a background of national income, national wealth and the flow of funds.

541 Marketing Management Controls (3) Fall

Prerequisite: Consent of instructor. Applications to marketing problems tools provided by such fields as accounting, statistics, applied psychology, finance, and economics. Types of analysis; motivational research, operations research, quantitative market analysis, sales research, and market trends.

542 Seminar in Marketing Problems (3) Spring

Prerequisite: Consent of instructor. Analysis of influences on the consumer, distribution channels, brand and price policies, and other problems faced by executives in their marketing programs. Emphasis on the development of competence in adjusting marketing policies to changes in the general economic climate. Case approach.

560 Contemporary Management Planning (3) Fall

Prerequisite: Business 360 or equivalent. Development of a basic management philosophy with emphasis on business plans and planning, business objectives, ethical standards, business policy, responsibility,

authority and accountability, and organization structure. Case materials; searching analysis of company practices.

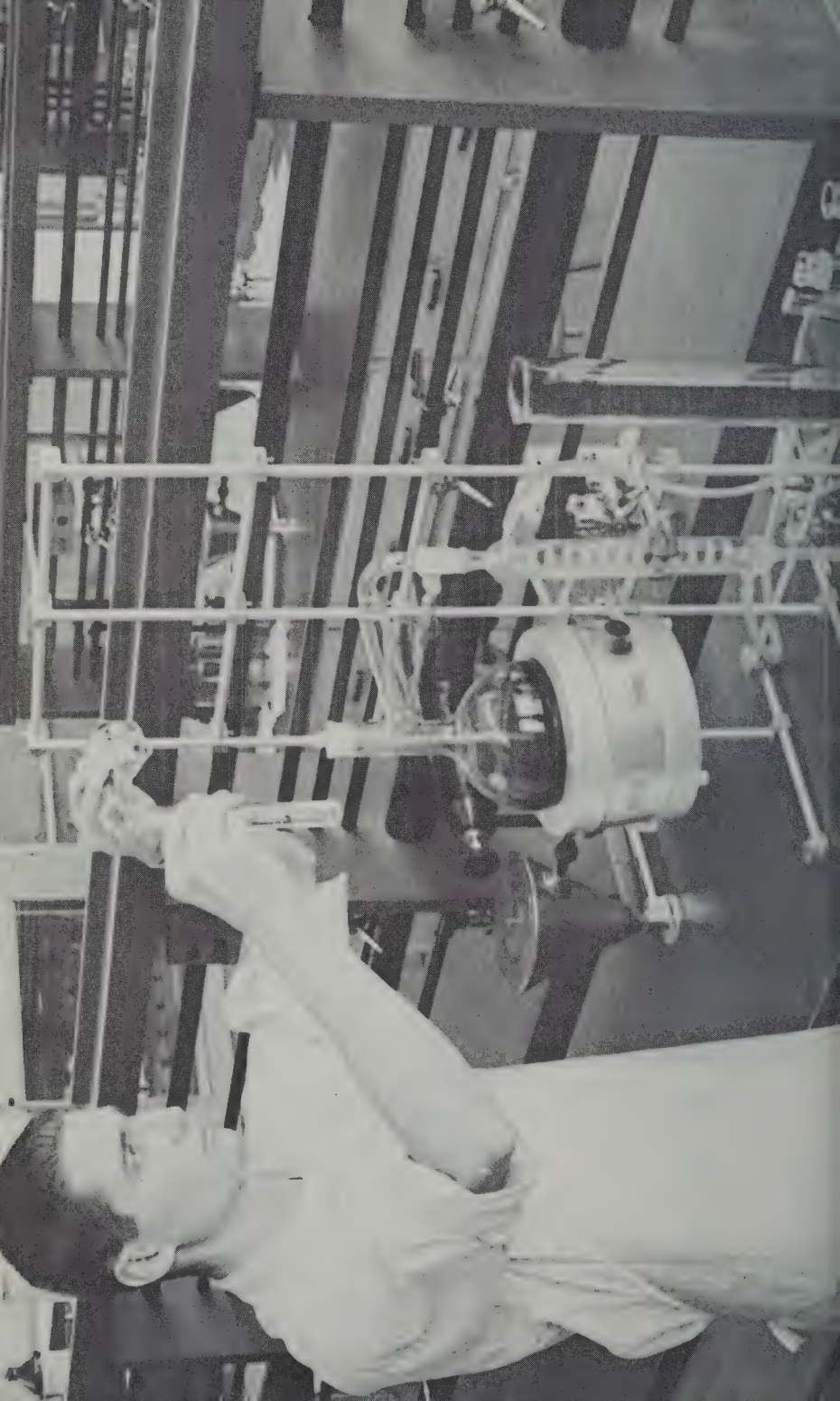
561 Contemporary Management Control (3) Spring

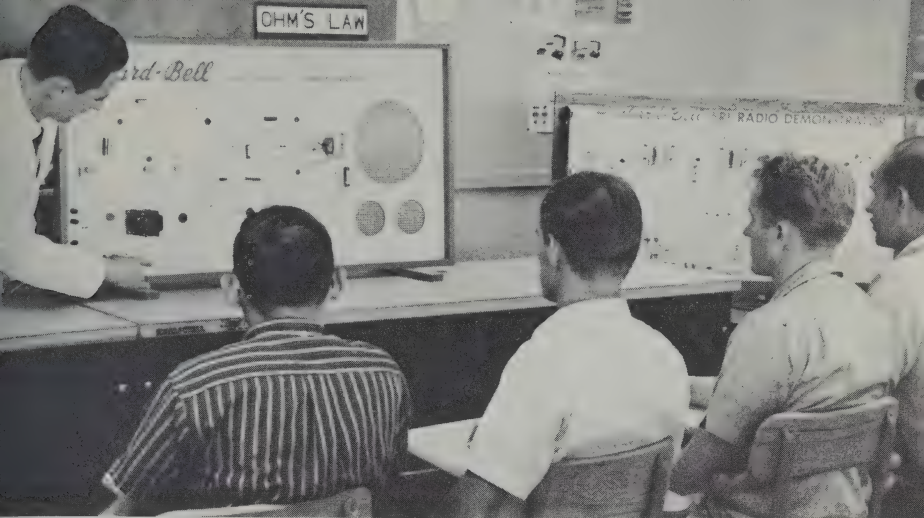
Prerequisite: Business 560. Continued development of a management philosophy; emphasis on the control of activities based upon plans and objectives discussed in 560. Cases and lectures concerned with executive leadership, morale and communications, control of operation, procedural analysis, automation and operations research.

599AB Graduate Project (1-2)

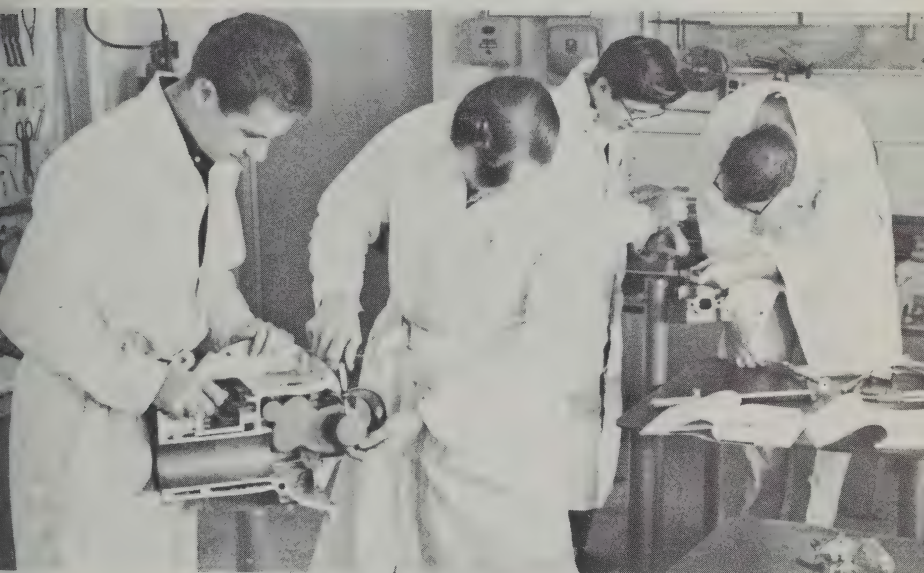
Directed studies authorized by the graduate adviser in business.







ELECTRICITY



AUTO SHOP (Above) ▲ and DRAFTING (Below) ▼





CHEMISTRY

(In the Division of Science and Mathematics)

STAFF: Jaffe (Department Head), Andreoli, Currell, Frisch, Holm, Keys, Klein, Onak.

BACHELOR'S DEGREE CURRICULA

Two programs are offered, one leading to the bachelor of science degree and the other to the bachelor of arts degree. The B.S. program (132 units) is designed to fit the needs of those who plan to (a) do graduate work; and (b) complete their formal education with the bachelor's degree and obtain positions in industrial laboratories.

The B.A. program fits the needs of those who (a) want a liberal education with a major in chemistry; (b) wish to obtain positions in the fields of chemical literature, technical sales, or chemical patents; (c) are premedical or predental students with a major in chemistry.

For those students who expect to achieve a bachelor's degree in chemistry in the minimum four-year period, the following high school preparation is recommended: algebra (two years), geometry, trigonometry, chemistry, or physics.

Bachelor of Science Major in Chemistry*

Lower Division

Chemistry 101—General Chemistry	5 units
Chemistry 102—General Chemistry and Qualitative Analysis.....	5 units
Chemistry 201—Quantitative Analysis I.....	3 units
Chemistry 202—Quantitative Analysis II.....	3 units
Physics 201—General Physics I.....	4 units
Physics 202—General Physics II.....	4 units
Physics 203—General Physics III.....	4 units
Geology 101—Physical Geology	4 units
Mathematics 100—Basic Mathematical Analysis.....	4 units
Mathematics 201—Analytic Geometry and Calculus I.....	4 units
Mathematics 202—Analytic Geometry and Calculus II.....	4 units
Mathematics 203—Analytic Geometry and Calculus III.....	4 units

Upper Division

Chemistry 401AB—Organic Chemistry	6 units
Chemistry 402AB—Organic Chemistry Laboratory.....	4 units
Chemistry 411AB—Physical Chemistry	6 units
Chemistry 412AB—Physical Chemistry Laboratory.....	2 units
Chemistry 410—Advanced Inorganic Chemistry.....	3 units
Select from the following.....	9 units
Chemistry 390—Glassblowing (1)	
Chemistry 413—Intermediate Physical Chemistry (3)	
Chemistry 414—Thermodynamics (3)	
Chemistry 420—Advanced Organic Chemistry (3)	
Chemistry 422—Organic Analysis (3)	

* One year of German is strongly recommended.

- Chemistry 424—Polymer Chemistry (3)
- Chemistry 426—Organic Syntheses (2)
- Chemistry 431AB—Biochemistry (4-4)
- Chemistry 446—Industrial Chemistry (3)
- Chemistry 448—Colloid Chemistry (3)
- Chemistry 462—Advanced Analytical Chemistry (3)
- Chemistry 464—Instrumental Methods of Analysis (3)
- Chemistry 499—Independent Study (1-3)
- Chemistry 398—Work-Study Assignments and Reports (1-2)

78 units

A student wishing to concentrate in the fields of biochemistry, organic, analytical, physical, or industrial chemistry during his senior year would be able to do so by choosing the proper courses from the following list.

Biochemistry

- Chemistry 431AB—Biochemistry (8)
- Chemistry 426—Organic Syntheses (2) *or*
- Chemistry 422—Organic Analysis (3)

Organic

- Chemistry 422—Organic Analysis (3)
- Chemistry 426—Organic Syntheses (2)
- Chemistry 420—Advanced Organic Chemistry (3)

Analytical

- Chemistry 422—Organic Analysis (3)
- Chemistry 462—Advanced Analytical Chemistry (3)
- Chemistry 464—Instrumental Methods of Analysis (3)

Physical

- Chemistry 413—Intermediate Physical Chemistry (3)
- Chemistry 414—Thermodynamics (3)
- Chemistry 448—Colloid Chemistry (3)
- Chemistry 464—Instrumental Methods of Analysis (3)

Industrial

- Chemistry 424—Polymer Chemistry (3)
- Chemistry 446—Industrial Chemistry (3)
- Chemistry 448—Colloid Chemistry (3)

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR CHEMISTRY MAJOR (B.S. Degree)

FRESHMAN YEAR			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Chem. 101—Gen. Chemistry.....	5	Chem. 102—Gen. Chemistry and	
*Math. 100—Basic Math. Analysis	4	Qual. Analysis	5
Geol. 101—Phys. Geology.....	4	Math. 201—Anal. Geom. & Calc. I	4
†Engl. 150—Written Expr. <i>or</i>		Physics 201—Gen. Physics I	4
Lang. Arts 150A	3	†Sp. 150—Oral Expr. <i>or</i>	
Phys. Educ. 150	1	Lang. Arts 150B	3
		Phys. Educ. elective	1

* It is recommended that students having credit for Math. 100 (on the basis of adequate high school background and/or examination) start their mathematics sequence with Math. 201 in the fall semester and substitute Math. 401 in their junior or senior year.

† See "Note" on page 61.

SOPHOMORE YEAR

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Chem. 201—Quant. Anal. I.....	3	Chem. 202—Quant. Anal. II.....	3
Math. 202—Anal. Geom. and Calc. II.....	4	Math. 203—Anal. Geom. and Calc. III.....	4
Physics 202—Gen. Physics II.....	4	Physics 203—Gen. Physics III.....	4
Govt. 150—Govt. and Am. Soc.....	3	Bio. Sci. 153—Prin. of Bio. or.....	3
Art 150—Art, Music, Dance or.....	3	Language elective.....	4
Language elective.....	4		

JUNIOR YEAR

Chem. 401A—Organic Chem.	3	Chem. 401B—Organic Chem.	3
Chem. 402A—Organic Chem. Lab.	2	Chem. 402B—Organic Chem. Lab.	2
Chem. 410—Adv. Inorg. Chem.	3	Chem. 411B—Physical Chem.	3
Chem. 411A—Physical Chem.	3	Chem. 412B—Phys. Chem. Lab.	1
Chem. 412A—Phys. Chem. Lab.	1	Engl. 250—Understanding Lit.	3
Psych. 150—Human Behavior.....	3	Phil. 150—Philosophic Ideas.....	3
H.&S. 350—Personal Health.....	2	Elective.....	2

SENIOR YEAR

Chemistry electives.....	6	Chemistry electives.....	3
Hist. 250—U.S. History.....	3	General Education electives.....	6
Gen. Educ. Soc. Sci. elective.....	3	Electives.....	3
Electives or.....	1	Biol. Sci. 153—Prin. of Biol. or.....	3
Art 150—Art, Music, Dance or.....	3	Electives.....	4
Electives.....	4		

Bachelor of Arts Major in Chemistry *

Lower Division

Chemistry 101—General Chemistry.....	5 units
Chemistry 102—General Chemistry and Qualitative Analysis.....	5 units
Chemistry 201—Quantitative Analysis I.....	3 units
Chemistry 202—Quantitative Analysis II.....	3 units
Physics 201-202-203—General Physics I, II, III <i>or</i>	
Physics 101-102—Physics I and II.....	8-12 units
Mathematics 100—Basic Mathematical Analysis.....	4 units
Mathematics 201—Analytic Geometry and Calculus I.....	4 units
Mathematics 202—Analytic Geometry and Calculus II.....	4 units†
Geology 101—Physical Geology.....	4 units‡

Upper Division

Chemistry 401AB—Organic Chemistry.....	6 units
Chemistry 402AB—Organic Chemistry Laboratory.....	4 units
Chemistry 410—Advanced Inorganic Chemistry.....	3 units
Physical Science electives.....	12 units

(Physical science electives will be distributed as follows:

Chemistry 6-9 units; Physics 3-6 units; Geology 0-3 units.)

61-69 units

* One year of German is strongly recommended but not required.

† Mathematics 202 is recommended but not required.

‡ Premedical students may elect a biology course in lieu of the geology course.

SUGGESTED FOUR YEAR COURSE SEQUENCE FOR CHEMISTRY MAJOR (B.A. Degree)

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Chem. 101—Gen. Chemistry.....	5	Chem. 102—Gen. Chemistry and Qual. Analysis	5
*Math. 100—Basic Math. Analysis	4	Math. 201—Anal. Geom. & Calc. I	4
Geol. 101—Phys. Geology.....	4	‡Sp. 150—Oral Expr. <i>or</i>	
P.E. 150	1	Lang. Arts 150B.....	3
‡Engl. 150—Written Expr. <i>or</i>		Govt. 150—Govt. & Amer. Soc.	3
Lang. Arts 150A.....	3	Phys. Educ. elective.....	1

SOPHOMORE YEAR

Chem. 201—Quant. Anal. I.....	3	Chem. 202—Quant. Anal. II.....	3
†Physics 201 Gen. Physics I.....	4	Physics 202—Gen. Physics II.....	4
Bio. Sci. 153—Prin. of Biology.....	3	Psych. 150—Human Behavior.....	3
Art 150—Art, Music, Dance.....	3	Phil. 150—Phil. Ideas.....	3
Elective	3	Elective	3

JUNIOR YEAR

Chem. 401A—Organic Chem.	3	Chem. 401B—Organic Chem.	3
Chem. 402A—Organic Chem. Lab.	2	Chem. 402B—Organic Chem. Lab.	2
Chem. 410—Adv. Inorg. Chem.	3	Engl. 250—Understanding Lit.	3
Hist. 250—U. S. History.....	3	Gen. Educ. Soc. Sci. elective.....	3
Phys. Sci. elective.....	4	H&S. 350—Personal Health.....	2

SENIOR YEAR

Phys. Sci. elective.....	4	Phys. Sci. elective.....	4
Gen. Educ. elective.....	3	Gen. Educ. elective.....	3
Electives	8	Electives	9

COURSES OF INSTRUCTION

100A-B Fundamentals of Chemistry (3-3)

Prerequisite: High school algebra. Designed for majors in nursing and home economics. Includes elementary inorganic, organic, and biological chemistry. Does not apply as subject credit for majors or minors in the Division of Science and Mathematics. Lecture two hours; laboratory three hours.

101 General Chemistry (5)

Prerequisite: High school chemistry or physics, or consent of instructor, two years of high school algebra and proficiency on the mathematics section of the entrance examination. The first half of a basic course in the fundamental laws and theories of chemistry. Lecture three hours; recitation one hour; laboratory three hours.

102 General Chemistry and Qualitative Analysis (5)

Prerequisite: Chemistry 101. Continuation of General Chemistry. Qualitative analysis of the metallic elements. Lecture three hours; laboratory six hours.

* It is recommended that students having credit for Math. 100 (on the basis of adequate high school background and/or examination) substitute Math. 201 and Math. 202.

† For the student who elects the 12-unit sequence in physics the suggested lower division program will be as shown for the B.S. degree.

‡ See "Note" on page 61.

201 Quantitative Analysis I (3) Fall

Prerequisite: Chemistry 102. Principles and techniques of volumetric and gravimetric analysis. Lecture one hour; laboratory six hours.

202 Quantitative Analysis II (3)

Prerequisite: Chemistry 201. Modern methods of chemical analysis and introduction to physical and instrumental methods. Lecture one hour; laboratory six hours.

308 Elementary Organic Chemistry (4)

Prerequisite: Chemistry 101. Chemistry 102 strongly advised. Survey of aliphatic, aromatic, and heterocyclic compounds of carbon. Compounds of biological importance are emphasized. Not recommended for majors in the physical sciences or for premedical students.

390 Glassblowing (1)

Elementary techniques in glassblowing. Laboratory three hours. Offered on demand.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

401A-B Organic Chemistry (3-3)

Prerequisite: Chemistry 102. Properties and reactions of the aliphatic and aromatic carbon compounds. Emphasis on fundamental theories and reaction mechanisms. Lecture three hours.

402A-B Organic Chemistry Laboratory (2-2)

Laboratory exercises to accompany Chemistry 401AB. Must be taken concurrently. Preparation and purification of organic compounds. Laboratory six hours.

403A-B Organic Chemistry Laboratory (1-1)

Laboratory exercises to accompany Chemistry 401AB. Must be taken concurrently. Preparation and purification of organic compounds. Designed for nonchemistry majors who do not have sufficient elective leeway to register for the regular four-unit Chemistry 402AB. Laboratory three hours.

410 Advanced Inorganic Chemistry (3) Fall

Prerequisite: Chemistry 101, 102. Study of the physical and chemical properties of the elements from the standpoint of atomic structure and chemical bonding. Emphasis on modern theories of electronic configurations. Lecture three hours.

411A-B Physical Chemistry (3-3)

Prerequisites: Chemistry 102, Math. 203, and Physics 203. (Must be taken concurrently with Chemistry 412AB.) Fundamental physical laws and theories of chemical structure, thermodynamics and kinetics. Lecture three hours.

412A-B Physical Chemistry Laboratory (1-1)

Laboratory to accompany Chemistry 411AB. Laboratory three hours.

413 Intermediate Physical Chemistry (3)

Prerequisite: Chemistry 411AB. Selected topics in physical chemistry including radiochemistry, colloid chemistry, photochemistry. Lecture three hours. Offered on demand.

414 Chemical Thermodynamics (3)

Prerequisite: Chemistry 411A. Introduction to principles and applications of thermodynamics for students of chemistry and chemical engineering. Includes mathematical treatment of the laws of thermodynamics and the thermodynamic variables, internal energy, heat content, entropy, work function and free energy.

420 Advanced Organic Chemistry (3) Fall

Prerequisite: Chemistry 401AB. Theoretical aspects of organic chemistry; emphasis on reaction mechanisms and stereochemistry. Lecture three hours.

422 Organic Analysis (3) Spring

Prerequisite: Chemistry 401AB. Methods of qualitative and quantitative analysis of organic compounds. Lecture one hour. Laboratory six hours.

424 Polymer Chemistry (3)

Prerequisite: Chemistry 401AB; Chemistry 411AB. Theories of polymer formation. Preparation and characterization of polymers and relationship of structure to physical properties. Lecture three hours. Offered on demand.

426 Organic Syntheses (2)

Prerequisite: Chemistry 401AB. Advanced laboratory techniques in the preparation of organic compounds. Laboratory six hours.

431A-B Biochemistry (4-4)

Prerequisites: Chemistry 201, 401A-B and 402A-B or 403A-B. The chemistry and metabolism of carbohydrates, proteins, lipids, vitamins, hormones in animals, plants and microorganisms. Lecture three hours; laboratory three hours.

433 Clinical Biochemistry (3) Spring

Prerequisite: Chemistry 431. Study of biochemical methods for the analysis of blood, urine, and other body fluids. Emphasis on standard clinical procedures. Lecture two hours; laboratory three hours.

446 Industrial Chemistry (3)

Prerequisites: Chemistry 101, 102, and 401A. Fundamental chemical and physical principles applied to typical industrial processes. Lecture three hours. Offered on demand.

448 Colloid Chemistry (3)

Prerequisites: Chemistry 101, 102, and 411AB. Electrical and optical properties of colloidal systems, interfacial phenomena, methods of determining the size and shape of colloidal particles. Lecture three hours. Offered on demand.

462 Advanced Analytical Chemistry (3) (Offered on demand)

Prerequisites: Chemistry 201, 411A. Principles underlying chemical methods of analysis. Emphasis on equilibria and mechanisms of precipitation, complex formation, acid-base, and redox reactions. Lecture three hours.

464 Instrumental Methods of Analysis (3) (Offered on demand)

Prerequisite: Chemistry 201. Fundamentals and applications of instrumental methods in chemical analysis. Emphasis on potentiometry, conductivity, voltammetry and spectroscopy. Lecture one hour; laboratory six hours.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

ECONOMICS

(In the Division of Business and Economics)

STAFF: Mathy (Department Head), Bertram, Bright, Fiekowsky, Mah, Massey, Moore, Norby, F. Simpson, W. Simpson, Sorrensen, Tipton, Wu. *Part-time:* Cook, Elliott, Ewart, Horton, Stout.

BACHELOR'S DEGREE CURRICULUM

Major in Economics

Prepares students for a B.A. degree in economics to qualify for positions in business and government. Specific areas include: finance, transportation, international trade, banking, agriculture, conservation of resources, communications, and interstate commerce. A major in economics also provides foundations for teaching at the collegiate level and for entrance into a graduate school of business or a law school.

Lower Division

Business 200A—Principles of Accounting.....	3 units
Economics 201AB—Principles of Economics	6 units
(Courses in economic geography, history, government, mathematics, and second semester of accounting are recommended.)	

Upper Division

Economics 303—Money, Banking, and the Economy.....	3 units
Economics 310—Economics of the Business Firm.....	3 units
Economics 411—National Income Analysis.....	3 units
Business 309—Applied Business and Economic Statistics I.....	3 units
Social Science 400—Scientific Methods in the Social Sciences	3 units
Electives in Economics and Business Administration selected in consultation with adviser	12 units
(The only Business Administration courses acceptable are Business 303; 343; 409; 472; 485.)	

36 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR ECONOMICS MAJOR

FRESHMAN YEAR			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
†Engl. 150—Written Expr. <i>or</i>		†Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A.....	3	Lang. Arts 150B.....	3
Bio. Sci. 153—Prin. of Biology <i>or</i>		Bio. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151	3	Phys. Sci. 151	3
Govt. 150—Govt. and Am. Soc.	3	Art 150—Art, Music, Dance	3
P.E. 150	1	Phys. Educ. elective.....	1
*Econ. 150—Econ. for the Citizen	3	Electives	6
Elective	3		

* Recommended.

† See "Note" on page 61.

SOPHOMORE YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Phil. 150—Phil. Ideas.....	3	Engl. 250—Understanding Lit.....	3
Biol. Sci. 154 <i>or</i>		Hist. 250—U. S. History.....	3
Phys. Sci. 152.....	3	Psych. 150—Human Behavior.....	3
Bus. 200A—Prin. of Acctg.....	3	**Bus. 200B—Prin. of Acctng.....	3
Econ. 201A—Prin. of Economics....	3	Econ. 201B—Prin. of Economics....	3
Elective	3		

JUNIOR YEAR

H & S 350—Personal Health.....	2	Econ. 310—Econ. of Bus. Firm.....	3
Math. 353—Gen. Educ. Math.....	3	Soc. Sci. 400—Methods and Logic	3
Bus. 309—Applied Bus. Stat. I.....	3	†Econ. or Business electives.....	6
Econ. 303—Mon., Bank., Econ.....	3	Elective	3
Electives	5		

SENIOR YEAR

Gen. Educ. elective.....	3	†Econ. or Business electives.....	6
Econ. 411—Nat. Inc. Anal.....	3	Electives	10
Electives	9		

MASTER OF ARTS DEGREE

Prerequisite: An undergraduate major in economics from an accredited college or university, or equivalent preparation to provide a foundation for advanced work in economics. Applicants must consult an adviser in economics to determine if any deficiencies exist before entering the graduate program.

1. Core Requirements

- | | |
|--|----------|
| a. Economics 510—Advanced Economics of an Enterprise System..... | 3 units |
| b. Economics 520—Contemporary Economic Theory..... | 5 units |
| c. Economics 599AB—Graduate Thesis * | 3 units |
| d. Business 409—Applied Business and Economic Statistics II..... | 3 units |
| 2. "400" and "500" courses selected with the approval of an adviser.
At least 3 units must be at the "500" level..... | 10 units |
| 3. Business Administration, Mathematics, or Social Sciences electives
(selected with approval of adviser)..... | 6 units |
| 4. Comprehensive oral and written examinations in the fields of eco- | |

30 units

COURSES OF INSTRUCTION

All courses below, except Economics 150, 201AB, and 300 have a principles of economics course (or Economics 201AB) as a minimum prerequisite.

150 **Economics for the Citizen (3)** (General Education)

Economic organization of free society, consideration of the form and economic function of such socio-economic units as the household, business enterprise, and government. Primary attention to the interdepend-

* An oral review of the proposed thesis is to be held before a division committee not later than the 12th week of the first semester in residence. Thesis is to be presented to the chairman of the candidate's committee at least three weeks prior to the end of the semester in which the degree is to be conferred.

† See economics major requirements, page 136.

** Recommended.

ence of these economic units on the level of economic activity and the allocation of resources.

201AB Principles of Economics (3-3) Fall, Spring

Introduction to the concepts and tools of economic analysis. First semester emphasizes aggregative economics, including national income, money and banking, and the role of government. Second semester concentrates on price and distribution theory and international trade.

300 Economics for Engineers (3) Fall, Spring

Basic economic concepts; relationship of economic problems and engineering problems; role of interest and capital in problems of cost minimization; analysis of financial statements; analysis of original and alternative investments; capital depreciation and replacement problems.

302 Labor Economics (3) Fall, Spring

Use of labor resources in the economic system; employment, wage rates, development of unions and collective bargaining; labor legislation.

303 Money, Banking, and the Economy (3) Fall, Spring

Nature and flow of money and credit; influence on prices, production, and employment. Commercial and Federal Reserve banking systems and the level of national income.

310 Economics of the Business Firm (3) Fall, Spring

Prerequisite: Economics 201B or equivalent. The operation of a price system in a free enterprise economy. Special emphasis on economic factors governing and influencing managerial decisions.

390 Current Economic Problems (3) Spring (Offered 1961-62)

Prerequisite: At least one course in economics. Analysis of significant problems of the day such as agricultural price supports, international dollar shortage, industrial and labor monopoly situation, economic problems created by defense program or total war, and events of economic significance which arise during the semester.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

**405 Economics of Public Utilities (3) Spring
(Offered 1962-63)**

Legal and economic basis for governmental regulation of prices and quality of product of privately owned businesses. Emphasis on such industries as electricity, gas, telephone, and urban transportation.

406 Principles of International Economics (3) Fall

Economic bases and mechanisms of international commercial relations; government policies on tariffs, exchange controls, subsidies.

411 National Income Analysis (3) Fall

Prerequisite: Economics 303. Analysis and measurement of national income and level of employment.

412 Development of Economic Thought (3) Spring

Evolution of ideas which man has developed over the years to analyze and deal with economic problems.

420 Labor Legislation (3) Fall

Prerequisite: Economics 302. Development of common law decisions on the legal status of trade unions and their activities. Consideration of federal and state laws and their administration in social security, protective labor legislation, and labor relations legislation; emphasis on economic implications.

**430 Federal Reserve Policies and the Money Markets (3) Spring
(Offered 1962-63)**

Prerequisite: Economics 303. Advanced study of the money system. Emphasis on policies of U. S. Treasury, Federal Reserve banks, and other factors influencing and determining the flow of funds and money market conditions.

433 Public Finance (3) Fall

Prerequisite: Economics 303 recommended. Survey of expenditures of governments, methods of securing funds; the impact on economic functions of society.

435 Economic Fluctuations (3) Fall, Spring

Prerequisite: Economics 303. Analysis of variations in business activity; survey of various theories advanced to account for these variations; analysis of proposals for reducing fluctuations.

Credit may not be secured for both Economics 435 and Business 431.

460 Economic Growth of Underdeveloped Areas (3) Spring

Problems of economic development in economically backward countries and the forces which give rise to long-period growing power to an economy are examined with the aid of economic analysis, history and country-case studies.

471 Economic History of the United States (3) Spring

Historical study of American economic development; industrialization; national legislation in industry and commerce. (Same as History 476.)

472 Economic History of Europe (3) Fall

Examination of economic development of modern Europe; special attention to industrial revolution. (Same as History 438.)

480 Comparative Economic Systems (3) Fall (Offered 1961-62)

Problems with which all societies must deal in the economic aspects of life. Comparative study of different systems which man has proposed or which are now in operation to deal with economic problems.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

GRADUATE COURSES**510 Advanced Economics of an Enterprise System (3) Spring**

Prerequisites: Business 502, Economics 310 or consent of instructor. Scope and method of economic analysis. Emphasis on the role of the market in resource allocation; the influence of government control and private intervention on economic welfare.

520 Contemporary Economic Theory (5) Spring (Offered 1961-62)

Prerequisite: Economics 411. Intensive examination of the theory of national income; influence of money and government fiscal policy upon economic stability.

599AB Graduate Thesis (1-2)

An independent paper to be developed under the direction of members of the graduate faculty.

EDUCATION

R. F. Sando, Division Chairman

ORGANIZATION

The entire college staff shares the responsibility for teacher training. The Division of Education administers the following programs in professional education.

Elementary Education (Department Head, Cappa)
Secondary Education (Department Head, Dahl)
Special Education (Department Head, Lord)
Administration and Supervision (Department Head, Ostlie)
Guidance and Pupil Personnel Services (Department Head, Mortensen)

ADVISEMENT

Personal advisement is available to any student seeking a degree or a credential in teacher education. At his first registration each student should consult an adviser in the field in which he intends to work. He may continue to work with this adviser or seek another as he becomes acquainted with the staff. Full responsibility for meeting all requirements set forth in the catalog will remain with each student.

The Office of Admissions and Records will evaluate previous college work in terms of its relationship to the requirements of Los Angeles State College. All new transfer students will be issued an evaluation, referred to as a "Credit Summary," and a credential evaluation before the beginning of his second semester. Copies are mailed to the student showing those courses that have been accepted on transfer and those courses which are yet to be taken to fulfill the credential and/or degree requirements. Both of these are to be followed without deviation to be assured of meeting graduation requirements. Once issued to the student, the evaluation becomes valid as long as the student pursues the objective specified, and remains in continuous attendance. Any student seeking more than one credential must have an evaluation for each credential.

CREDENTIALS

Los Angeles State College is accredited by the State Board of Education to recommend qualified students for the following credentials:

1. Elementary Education
 - a. General Elementary Credential, see page 146.
 - b. Kindergarten-Primary Credential, see page 147.
2. Secondary Education
 - a. Junior High School Credential, see page 150.
 - b. General Secondary Credential, see page 151.

- c. Special Secondary Credential, see page 152.
 - Art, see page 83.
 - Business Education, see page 111.
 - Home Economics, see page 240.
 - Industrial Arts, see page 247.
 - Limited Part-time in Industrial Arts, see page 247.
 - Music, see page 282.
 - Nursing Education, see page 300.
 - Physical Education, see page 306.
- 3. Special Education
 - Credential to Teach Exceptional Children with specializations in the following area:
 - Visually Handicapped, see page 156.
 - Deaf or Hard of Hearing in Special Day Classes, see page 157.
 - Speech Correction and Lip Reading in Remedial Classes, see page 155.
 - Mentally Retarded, see page 156.
 - Orthopedically Handicapped Including the Cerebral Palsied, see page 156.
- 4. Administration and Supervision
 - a. Elementary Administration Credential, see page 163.
 - b. Secondary Administration Credential, see page 163.
 - General Supervision Credential, see page 164.
- 5. General Pupil Personnel Services Credential
 - a. Pupil Counseling, see pages 159-160.
 - b. Welfare and Attendance, see pages 159-160.
 - c. School Psychometry, pages 159-160.
 - School Psychology, see pages 159-160.

Los Angeles State College offers courses which may qualify a graduate to receive the following credentials upon *direct application* to the State Department of Education:

- Health and Development Credential—School Nurse, see page 300.
- Junior College Credential, see page 153.

ADMISSION TO TEACHER EDUCATION

Admission to Los Angeles State College does not automatically entitle a student to become a candidate for a credential. The standards for admission to credential candidacy vary depending upon the field which the candidate wishes to enter. Candidates working for credentials in administration and supervision or in special education should consult the advisers in each case.

A candidate for a regular teaching credential should enroll in Education 300 during his second semester sophomore year or during his first semester at Los Angeles State College if entering after his sophomore year. The student who successfully completes Education 300 will have met the requirements for admission to the teacher education program. Students on scholastic probation are not permitted to take education courses. Education 300 students will complete the following tests required for admission to teacher education:

1. Writing proficiency test.
2. Speech test.
3. Fundamentals test.
4. Health examination, including chest X-ray.

5. Personality tests.
6. College aptitude test. (This is included with entrance examination. The entrance examination must have been taken within three years of enrollment in Education 300.)

In addition, he must demonstrate evidence of:

1. Scholarship. A grade-point average of 2.35 is expected of all credential candidates. Grades in all education courses must be "C" or better. Students on scholastic probation may not take professional education courses.
2. Academic and Cultural Preparation. A broad, well-planned program of general education with an appropriate major and/or minor(s) is required. Competency is required in all subjects and skills commonly taught in the public school. Elementary credential candidates are urged to include at least 3 units in both art and music in their lower division program. Some skill in playing the piano is recommended for all elementary credential candidates and is required of all kindergarten-primary credential candidates.
3. Personal Fitness. The student must demonstrate personal qualifications in keeping with professional standards. Attention will be directed to general appearance, poise, dress, vitality, temperament, integrity, and general social attitude. Evaluation of personal qualifications may require rating by instructors at Los Angeles State College and possibly an interview by a selected committee.

DIRECTED TEACHING

Admission to teacher education (successful completion of Education 300) does not automatically admit the student to directed teaching.

Directed teaching is one of the most important aspects of the program of teacher education at Los Angeles State College. Admission to this phase of the teacher education program is one of the crucial points in the selection of future teachers. For this reason the Los Angeles State College has developed a careful screening and selection program through which all students who wish to do directed teaching must pass.

A Directed Teaching Committee has the responsibility of passing on all applications for directed teaching. To be assigned to directed teaching the candidate must meet the following requirements:

1. He must be a matriculated student, and possess an authorized permit from the Office of Admissions and Records to register for the semester in which the directed teaching is to be done. If the candidate has not been in continuous attendance at Los Angeles State College since matriculation status was first granted, he must file a "returning student application" with the Office of Admissions and Records within the specified deadline dates. Candidates who have attended as nonmatriculated students must comply with the admissions procedure outlined on page 45 for new students.

2. A satisfactory record on the health examination. Each student must be examined at the college health center.
3. An overall grade-point average of 2.35 for all credentials.
4. A grade of "C" or better in all education courses. Any education course with a grade below "C" must be repeated (or an approved substitute course taken). Students on scholastic probation may not take education courses.
5. Completion of Education 300—including satisfactory scores on the fundamentals examination, the writing proficiency test, and the speech test and the Scholastic Aptitude test. Education 300 should be taken the first semester at Los Angeles State College.
6. Completion of a minimum of 12 units of work in Los Angeles State College.
7. Completion of the course prerequisites for Education 440A-B, Education 442, Education 443, or Education 446 as listed in the course descriptions.
8. All secondary directed teaching candidates must be approved by the divisions representing their teaching major and minor.
9. Demonstration of suitable aptitude and fitness for teaching and for adjustment to public school conditions. This factor may be determined by tests, interviews, and other studies evaluated by committee action.
10. Evidence of personality and character traits in keeping with the standards of the profession. Specific attention shall be directed to physical appearance, poise, dress, vitality, social attitude, co-operativeness, temperament, and integrity.

If a student meets all the criteria listed above, he will be approved by the committee.

Ordinarily, all candidates for the kindergarten-primary, general elementary, junior high school, and the special secondary credentials will do their directed teaching in the last semester of their senior year. Ordinarily candidates for the general secondary credential will do their directed teaching in their graduate year. Candidates for the special education credentials will usually do their directed teaching in the graduate year, but outstanding students may be permitted to do directed teaching in the last semester of the senior year. Directed teaching assignments are made in the elementary and secondary schools of Los Angeles City and Los Angeles County. Application for directed teaching must be filed a semester ahead of the actual assignment. Students are responsible for observing the deadline for filing. Because of the amount of time and work required of students in directed teaching, they are encouraged to restrict their enrollment to no more than 12 units in the semester in which they carry 6 or more units of directed teaching. Heavy out-of-school workloads are strongly discouraged.

Provisional Credential Renewal

Los Angeles State College is prepared to co-operate with students seeking renewal of provisional credentials. A letter of recommendation to the State Department of Education will be written for the student only if the following conditions have been fulfilled.

1. The applicant must be a regularly admitted student.
2. The applicant must have completed Education 300 successfully.
3. The applicant must have completed the semester unit requirements established by the State Department of Education, at least six units of which must have been completed at Los Angeles State College.

Fulfillment of all requirements set forth by the State Board of Education for the renewal of provisional credentials are the sole responsibility of the candidate. Students are advised to matriculate immediately upon receipt of the first provisional credential and seek advisement from the admissions office and the head of the appropriate department.

Accelerated Program in Teacher Education

A student who has a baccalaureate degree in a field other than elementary education may secure an elementary teaching credential with one additional year of work. A student who has a baccalaureate degree with an appropriate major and minor may ordinarily secure a secondary teaching credential in a year and a summer session. For additional information consult the Elementary Education Department or Secondary Education Department.

ELEMENTARY EDUCATION

STAFF: Cappa (Department Head), Attwell, Bany, Bolling, Cowan, Denny, Graham, Hanna, Hearnton, Horner, Hutto, Johnson, Kendrick, Kolson, Kriegel, Langston, Loder, Michals, Odom, Palmer, Peckham, Powell, Samson, Scheffskey, Servey, Sistrom, B. Smith, Soeberg, Spencer, Sperry, Timson, Wilson.

Students planning to obtain a general elementary credential and/or a kindergarten-primary credential will ordinarily be granted the bachelor of arts degree with a major in education at the same time they complete the requirements for the credential.

Candidates who have two or more years of successful teaching experience may waive Education 440AB and 441 provided they take 11 semester units of elective education courses. Letters verifying successful teaching experience should be signed by a principal, supervisor, or superintendent and forwarded to the Office of Admissions and Records.

A graduate student who has received a bachelor's degree with a major other than elementary education who intends to do directed teaching at Los Angeles State College will be required to complete seven units in the composite minor including at least one course in three of the following four areas: art, music, language arts, and physical education.

The final selection of courses from the composite minor should be made after consultation with the education adviser. By proper planning such a *graduate* student can earn a kindergarten-primary or a general elementary credential in two semesters.

BACHELOR'S DEGREE CURRICULA

General Elementary Credential (Major and Composite Minor)

Lower Division

No professional courses in education, nor courses in the composite minor (except as indicated by **), taken at a junior college will satisfy credential requirements. It is recommended that lower division work include at least one course in both music and art.

Upper Division *

Education 300—Introduction to Credential Programs.....	N. cr.
Education 412—Principles, Curriculum and Methods in Elementary Education	8 units
Education 413—Psychological and Sociological Foundations of Education	5 units
Education 440AB—Directed Teaching	8 units
Education 441—The Teacher in the School and Community.....	3 units

* Courses completed more than 20 years ago may not be applied toward major or minor requirements.

Composite Minor*: This program should be selected with the adviser.

1. Art—Select from the following 4 units
 Art 300—Art for Elementary School (2)
 Art 320—Crafts for Elementary School (2)
 Art 340—Industrial Arts in the Elementary School (2)
2. Music 4 units
 Music 300AB—Music for Children (2-2)
3. Language Arts—Select from the following 3 units
 English 430—Interpreting Children's Literature (3)
 Speech 460—Speech and Dramatic Activities in Elementary School (3)
 † Speech 461—Speech Problems in the Classroom (3)
4. Social Studies—Select from the following 3 units
 Geography 150—Human Geography (3)
 Geography 431—Geography of California (3)
 History 481—The Westward Movement and the West (3)
 History 488—California (3)
5. Physical Education 3 units
 P.E. 420—Physical Education in Elementary Schools (3)
6. Natural Science—Select from the following 3 units
 Physical Science 152—Principles of Physical Science II (3)
 Biological Science 154—Principles of Biology II (3)
 Nature Study 355—Natural Science and California Culture (3)
 Nature Study 461—Nature in California (3)
7. Mathematics 3 units
 Math. 120—College Arithmetic (3)**

Kindergarten-Primary Credential (Major and Composite Minor)

Lower Division

No professional courses in education, nor courses in the composite minor (except as indicated by **), taken at a junior college will satisfy credential requirements. It is recommended that lower division work include at least one course in music and art. Some skill at piano playing will be required.

Upper Division *

- | | |
|--|---------|
| Education 300—Introduction to Credential Programs..... | N. Cr. |
| Education 405—Kindergarten-Primary Education | 4 units |
| Education 412—Principles, Curriculum and Methods in Elementary Education | 8 units |
| Education 413—Psychological and Sociological Foundations of Education | 5 units |
| Education 440A-B—Directed Teaching | 8 units |
| Education 441—The Teacher in the School and Community..... | 3 units |

Composite Minor*: This program should be selected with the adviser.

1. Art—Select from the following 4 units
 Art 300—Art for Elementary School (2)
 Art 320—Crafts for Elementary School (2)
 Art 340—Industrial Arts in the Elementary School (2)

* Courses completed more than 20 years ago may not be applied toward major or minor requirements.

** May be taken at junior college or lower division.

† Students who are seeking, or who plan to seek, a special education credential in any area may substitute Speech 434 for Speech 461 in this particular option.

2. Music 4 units
Music 300AB—Music for Children (2-2)
3. Language Arts—Select from the following 3 units
English 430—Interpreting Children's Literature (3)
Speech 460—Speech and Dramatic Activities in Elementary
Schools (3)
† Speech 461—Speech Problems in the Classroom (3)
4. Social Studies—Select from the following 3 units
Geography 150—Human Geography (3)
Geography 431—Geography of California (3)
History 481—The Westward Movement and the West (3)
History 488—California (3)
5. Physical Education 3 units
P.E. 420—Physical Education in Elementary Schools (3)
6. Natural Science—Three units selected from 3 units
Physical Science 152—Principles of Physical Science II (3)
Biological Science 154—Principles of Biology II (3)**
Nature Study 355—Natural Science and California Culture (3)
Nature Study 461—Nature in California (3)
7. Mathematics 3 units
Math. 120—College Arithmetic (3)**

SUGGESTED FOUR YEAR PROGRAM FOR ELEMENTARY EDUCATION MAJOR *

FRESHMAN YEAR			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
*Engl. 150—Written Expr. or		*Sp. 150—Oral Expr. or	
Lang. Arts 150A	3	Lang. Arts 150B	3
Biol. Sci. 153—Prin. of Biology or		Biol. Sci. 153—Prin. of Biology or	
Phys. Sci. 151	3	Phys. Sci. 151	3
P.E. 150	1	Math. 120—College Arith.	3
Art elective	2	Phys. Educ. elective	1
Electives	7	Music elective	2
		Electives	4

SOPHOMORE YEAR

Engl. 250—Understanding Lit.	3	Govt. 150—Govt. and Amer. Soc.	3
Art 150—Art, Music, Dance	3	Gen. Educ. Soc. Sci. elective	3
Hist. 250—U. S. History	3	Psych. 150—Human Behavior	3
Biol. Sci. 154—Prin. of Biology or		Electives	6
Phys. Sci. 152	3		
Electives	3		

JUNIOR YEAR

Educ. 300—Intro. Cred. Prog.	N. Cr.	H & S 350—Personal Health	2
Phil. 150—Phil. Ideas	3	Gen. Educ. elective	3
Art 300—Art for the Elem. Sch.	2	Art 320—Crafts for Elem. Sch. or	
Music 300A—Music for Children ..	2	Art. 340—Ind. Arts in Elem. Sch.	2
Nat. Sci. (Composite minor)	3	Music 300B—Music for Children ..	2
Educ. 413—Psych and Soc.	5	Social Studies (composite minor) ..	3
		Phys. Educ. (composite minor)	3

* See "Note" on page 61.

† Students who are seeking, or who plan to seek, a special education credential in any area may substitute Speech 434 for Speech 461 in this particular option

** May be taken at junior college or lower division.

SENIOR YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Gen. Educ. elective.....	3	Educ. 440A-B—Directed Teaching	8
Educ. 412—Prin. Curric. and Methods in Elem. School.....	8	Educ. 441—Teacher in School and Community.....	3
Lang. Arts (composite minor).....	3	Electives	5
Elective	2		

Combination Program for the General Elementary and Exceptional Children Credentials

Students who do not hold a regular credential may complete the requirements for both general elementary and special education credentials concurrently. Upon written approval by both departments, the directed teaching requirement may be satisfied with four units in regular elementary, and four units in special education at elementary level. Consult special education adviser for additional program suggestions.

MASTER OF ARTS DEGREE IN ELEMENTARY TEACHING

The objectives of the master of arts degree in elementary teaching are: (1) To improve the candidate's competence in elementary teaching; and (2) to develop the candidate's ability for continued self-directed study in the field of elementary teaching.

1. Prerequisites:

- a. Graduate standing.
- b. A general elementary credential or kindergarten-primary credential (any state).
- c. One year of successful teaching experience prior to beginning course work in this program.

2. Area of specialization:

Select from the following..... 3 units

Education 507—History and Philosophy of Education (3)

Education 525—Educational Sociology (3)

Select from the following..... 6 units

Education 511—Research in Elementary School Mathematics (2)

Education 512—Research in Elementary School Social Studies (2)

Education 513—Research in Elementary School Reading (2)

Education 514—Research in Elementary School Language Arts (2)

Education 515—Research in Elementary School Science (2)

Education 530—Advanced Study in Child Development..... 3 units

Education 531—Seminar in Elementary Education..... 3 units

Education 560—Principles and Practices of Curriculum Development 3 units

Education 599AB *—Graduate Project

3 units

3. Outside the field of education

Select in consultation with adviser..... 6 units

4. Electives

Select in consultation with adviser..... 3 units

5. Comprehensive examination.

* At the discretion of the division chairman a three-unit course may be substituted for Educ. 599AB.

SECONDARY EDUCATION

STAFF: Dahl (Department Head), Adams, Ames, Austin, Better, Bienvenu, Brown, Butt, Eckhardt, Forbes, Furniss, Gellermann, Gilmore, Hahn, Henry, Higgins, Klopp, Knapp, Liddle, Lindquist, Linton, Neale, J. Nelson, L. Nelson, Ott, Pitts, Robinson, Roth, Schubert, Service, Shepherd, Smallenburg, E. M. Smith, Stivers, Wagstaff.

Before any candidate is assigned to directed teaching in secondary education he must have approval from the division chairman in the teaching major, the division chairman in the teaching minor, and the Department Head in Secondary Education. Each candidate should be certain he has an evaluation outlining all requirements for the credential. Advisement should be secured from both subject field advisers and an education adviser.

Junior High School Credential

By careful planning the candidate may earn the junior high school credential as part of a four-year college program.

The requirements listed below must be met by all students at Los Angeles State College who expect recommendation for the junior high school credential.

1. Completion of a bachelor's degree with a grade point average of at least 2.35.
2. Completion of the United States Constitution requirement either through course or examination.
3. Completion of two teaching minors in subject fields commonly taught in the junior high school. *In each case approval of the teaching minors must be obtained from the chairman of the division concerned.*
4. Completion of the education major listed below:

Education 300—Introduction to Credential Programs	N. Cr.
Education 413—Psychological and Sociological Foundations of Education	5 units
Education 471—Secondary Education: Principles, Curriculum, Evaluation	5 units
Education 480—Fundamentals of Counseling and Guidance	2 units
Education 490—Audio-Visual Instruction	2 units
Education 493—Methods in first teaching field	2 units
Methods in second teaching field	2 units
Education 444YZ—Problems in Secondary Teaching	3 units
Education 443YZ—Directed Teaching	6 units

General Secondary Credential

The general secondary credential is a five-year program requiring at least 30 units beyond the bachelor's degree.

A student working for a general secondary credential should earn a degree with a teaching major and a teaching minor. A student who has a major in the field not commonly taught in high school may use two teaching minors from the approved list. In addition the candidate must meet the professional education requirements outlined below:

1. Completion of a bachelor's degree from an accredited college or university with a grade point average of at least 2.35 including a program of general education as follows:
 - a. 40 units of general education * with a minimum of 6 semester units in each of the following four areas:
 - (1) Science and mathematics;
 - (2) The practical arts and the fine arts such as art, music, physical education, and health;
 - (3) Social studies;
 - (4) The communicative arts such as languages, literature, and speech.
2. Completion of the United States Constitution requirement, either through course or examination.
3. Completion of a minimum of 30 units of upper division and graduate courses after receipt of the bachelor's degree, including at least 6 units in subject fields commonly taught in junior and senior high school.
4. Completion of an approved teaching major and of an approved teaching minor. *Approval of the teaching major and the teaching minor must be obtained in each case from the chairman of the division concerned.* Majors and minors in the teaching fields shall be selected from the subject fields listed below:

Art, see page 83.
 Business Education, see page 111.
 English, see page 195.
 Foreign Languages, see pages 203 and 367.
 Health Education, see page 229.
 Home Economics, see page 240.
 Industrial Arts, see page 248.
 Language Arts, see page 259.

Life Science and General Science, see page 93.
 Mathematics, see page 266.
 Music, see page 282.
 Physical Education, see page 308.
 Physical Science and General Science, see page 318.
 Social Studies, see page 351.
 Speech and Drama, see page 376.

This 40-unit general requirement is completed when a student meets the graduation requirements outlined on pages 60-65. The candidate for a baccalaureate degree from Los Angeles State College must meet the 45-unit general education requirements as outlined on those pages.

5. Completion of the following courses in education: (Not necessary to complete prior to bachelor's degree. See adviser.)

Education 300—Introduction to Credential Programs.....	N. Cr.
Education 413—Psychological and Sociological Foundations of Education	5 units
Education 471—Secondary Education: Principles, Curriculum, Evaluation	5 units
Education 490—Audio-Visual Instruction	2 units
Education 493—Methods in Major teaching field.....	2 units
Methods in Minor teaching field.....	2 units
Education 480—Fundamentals of Counseling and Guidance.....	2 units
Education 444YZ—Problems in Secondary Teaching.....	3 units
Education 442YZ—Directed Teaching	6 units

Special Secondary Credential

The special secondary credential in subject fields is ordinarily earned during a four-year program. It requires no work beyond the bachelor's degree. No minor is required. The requirements including approved subject fields for teaching majors are outlined below:

1. Completion of a bachelor's degree from an accredited college or university with a grade point average of at least 2.35 including a program of general education as follows:
 - a. Limited industrial arts and nursing education require no general education.
 - b. Art, industrial arts, and music require 16 semester hours of general education.
 - c. Business education, physical education, and homemaking require 40 semester hours of general education.
2. Completion of the United States Constitution requirement, either through course or examination.
3. Completion of an approved teaching major from one of the following fields:

Art, see page 83.

Business Education, see page 111.

Home Economics, see page 240.

Industrial Arts, see page 247.

Limited Part-time Credential in Industrial Arts Education, see page 247.

Music, see page 282.

Physical Education, see page 306.

Approval of the teaching major must be obtained from the chairman of the division concerned. No minor is required.

4. Completion of the following courses* in education:

Education 300—Introduction to Credential Programs	N. Cr.
Education 413—Psychological and Sociological Foundations of Education	5 units
Education 471—Secondary Education: Principles, Curriculum, Evaluation	5 units
Education 493—Methods in Major Teaching Field	2 units
Education 490—Audio-Visual Instruction	2 units
Education 444YZ—Problems in Secondary Teaching	3 units
Education 443YZ—Directed Teaching	6 units

Junior College Credential

Persons wishing to teach in the junior colleges of California may do so by completing the special secondary, general secondary, or junior college credential. The junior college credential qualifies one to teach only at the junior college level. *Owing to its specialized nature, those considering work towards the junior college credential should obtain advisement from the Coordinator, Junior College Education.*

Los Angeles State College offers a program which qualifies and enables students to apply to the California State Department of Education for the junior college credential. State code requirements are as follows:

1. A master's or doctor's degree, preferably in a subject field taught in the junior college.
2. A graduate major acceptable to the appropriate academic department at Los Angeles State College. (Not less than 24 semester hours of work, at least 12 of which are upper division or graduate courses.)
3. Preparation in a minor teaching field to be approved by the Coordinator, Junior College Education. (At least 12 units, of which 6 must be upper division or graduate level.)
4. Completion of the United States Constitution requirement either through course or examination. (See page 64.)
5. Completion of 10 semester units in education including the following courses or equivalents.

Education 561—The Junior College	3 units
Education 562—Instruction in the Junior College	3 units
Education 548—Directed Teaching in the Junior College	4 units

MASTER OF ARTS DEGREE IN SECONDARY TEACHING

The master of arts degree in secondary teaching is designed for the secondary school teacher who wishes to improve his competence as a classroom teacher, extend his knowledge of the subject area which he teaches and achieve a greater understanding of his role as a liaison between school and community and the profession. This program is ex-

* The following courses required for the General Secondary Teaching Credential are not accepted as part of the M.A. degree program: Educ. 413, 442, 444, 471, 480, 490, 493, or their equivalent.

pected to develop his ability for continued self-directed study in the field of his professional service.

1. Prerequisites:

- a. Graduate standing.
- b. General secondary credential must be completed prior to advancement to candidacy for this degree.
- c. One year of successful teaching experience.

2. Area of specialization:

- a. Foundations area 11 units
 - Educ. 500—Educ. Investigation & Report (2)
 - Educ. 507—History and Philosophy of Education (3)
 - Educ. 510—Advanced Educational Psychology (3)
 - Educ. 525—Educational Sociology (3)
- b. Curriculum and Methods area select *two* from the following 4-5 units
 - Educ. 472—Problems of Junior High School (2)
 - Educ. 473—Developmental Reading in Sec. School (2)
 - Educ. 553—Core Curriculum in Secondary Educ. (2)
 - Educ. 554—Problems of High School Students (2)
 - Educ. 556—Seminar for Beginning Teachers (2)
 - Educ. 560—Principles & Practices of Curric. Develop. (3)
 - Educ. 590—Advanced Audio-Visual Methods (2)
- c. Select *one* course from the following 2-3 units
 - Educ. 532—Seminar in Secondary Education (3)
 - Educ. 599B—Graduate Project (2)

- 3.* Electives to be selected in teaching field or related areas, in consultation with adviser, at least six of these units must be outside of education 11-13 units

4. Comprehensive examination required of all candidates.

30 units

* The following courses required for the General Secondary Teaching Credential are not accepted as part of the M.A. degree program: Educ. 413, 442, 444, 471, 480, 490, 493, or their equivalent.

SPECIAL EDUCATION

STAFF: Lord (Department Head), Hatcher, Jeffers, Kinstler, Preston, Stafford, Taaffe.

Credential to Teach Exceptional Children

Curricula in special education are designed to prepare teachers for service to California's exceptional children; that is, children who deviate sufficiently from the physically and mentally normal to require special instruction or special services. Expanding programs in the State require approximately 800 new teachers each year.

All applicants for credentials to teach exceptional children must possess a valid regular teaching credential of the kindergarten-primary, general elementary, junior high school, or general secondary type; *except* that an applicant for a credential to teach, in special day classes, exceptional children who are deaf or severely hard of hearing may substitute for the valid regular teaching document an acceptable bachelor's degree and 10 semester hours of acceptable professional work in education required for a regular general teaching credential.

The credential to teach exceptional children authorizes the holder to serve as a teacher of exceptional children in special day classes or remedial classes in elementary and secondary schools in the area or areas of specialization named in the credential. The courses as outlined in the following credential programs incorporate units of work relating to guidance and counseling handicapped which are designed to meet the requirement in this area of study.

Combination Program for the General Elementary and Exceptional Children Credentials

Students who do not hold a regular credential may complete the requirements for both general elementary and special education credentials concurrently. Upon written approval by both departments, the directed teaching requirement may be satisfied with four units in regular elementary, and four units in special education at elementary level. Consult your advisors for additional program suggestions.

Speech Correction and Lipreading

This credential is issued to teachers who have completed the requirements for a valid elementary or secondary credential. Students who wish to earn the two credentials concurrently are urged to consult a special education adviser as early as possible.

Education 300—Introduction to Credential Programs	N. Cr.
Education 488—Psychology and Education of Exceptional Children	3 units

Education 300 is not required of students who have regular valid California public school teaching credentials.

Speech 434—Introduction to Speech Correction.....	3 units
Speech 431—American Phonetics	2 units
Speech 435Y—Advanced Speech Correction—Psychological	2 units
Speech 435Z—Advanced Speech Correction—Organic	2 units
Speech 438Y—Group Techniques in Speech Correction	2 units
Speech 439Y—Clinical Practice in Speech Correction	2 units
Education 420—Speech Reading	2 units
Education 427—Hearing and Its Measurement	3 units
Education 428—Speech Audiometry and Aural Rehabilitation	3 units
Audiology 429W—Clinical Practice in Aural Rehabilitation	2 units
Education 446Y—Directed Teaching in Special Education	4 units

Visually Handicapped

This credential is issued to teachers who have completed the requirements for a valid elementary or secondary credential. Students who wish to earn the two credentials concurrently are urged to consult a special education adviser as early as possible.

* Education 300—Introduction to Credential Programs.....	N. Cr.
Education 488—Psychology and Education of Exceptional Children	3 units
Education 489—Teacher Guidance for Exceptional Children	2 units
Speech 434—Introduction to Speech Correction	3 units
Education 425—Introduction to Vision	3 units
Education 424—Braille	3 units
Education 460—Education of Children with Impaired Vision	3 units
Education 445Y—Observation in Special Education	1 unit
Education 446Y—Directed Teaching	4 units

Skill typing by touch system is required.

Electives in special education to complete 24 units.

Orthopedically Handicapped

This credential is issued to teachers who have completed the requirements for a valid elementary or secondary credential. Students who wish to earn the two credentials concurrently are urged to consult a special education adviser as early as possible.

* Education 300—Introduction to Credential Programs.....	N. Cr.
Education 488—Psychology and Education of Exceptional Children	3 units
Education 489—Teacher Guidance for Exceptional Children	2 units
Speech 434—Introduction to Speech Correction	3 units
Speech 437—Speech Problems in Cerebral Palsy	3 units
Education 423—Survey of Physical Defects	3 units
Education 461—Methods of Teaching Crippled Children	3 units
Education 445Y—Observation in Special Education	1 unit
Art 410—Art Experiences for Exceptional Children	2 units
Education 446Y—Directed Teaching	4 units

Electives in special education to complete 24 units.

Mentally Retarded

* Education 300—Introduction to Credential Programs.....	N. Cr.
Education 488—Psychology and Education of Exceptional Children	3 units
Education 489—Teacher Guidance for Exceptional Children	2 units
Speech 434—Introduction to Speech Correction	3 units
Psychology 406—Mental Deficiency	3 units

* Education 300 is not required of students who have regular valid California public school teaching credentials.

Art 410—Art Experiences for Exceptional Children.....	2 units
Education 467—Methods of Teaching Mentally Retarded.....	3 units
Education 445Y—Observation in Special Education.....	1 unit
Education 446Y—Directed Teaching	4 units
Electives in special education to complete 24 units.	

Applicants preparing to teach severely retarded children should include the following preparation which may be completed as electives or as partial substitution for the above requirements: psychology and education of brain-injured children with an overview of clinical types of mental deficiency; music and rhythms for severely mentally retarded; kindergarten and primary methods; field work with severely mentally retarded children; and parent counseling.

Deaf and Severely Hard of Hearing

A credential to teach deaf children may be earned in two ways: (1) as a second credential for teachers holding a regular credential, (2) as a part of a baccalaureate program which includes the special education requirements and 10 hours of professional education. The requirements for each of these options are outlined below.

OPTION 1—FOR APPLICANTS WHO POSSESS A REGULAR CREDENTIAL

Education 421AB—Language for the Deaf.....	6 units
Education 422AB—Speech for the Deaf.....	6 units
Education 462—Teaching Elementary School Subjects to Deaf.....	2 units
Education 427—Hearing and Its Measurement.....	3 units
Education 428—Speech Audiometry and Aural Rehabilitation.....	3 units
Education 445Z—Observation in Special Education.....	2 units
Education 446Z—Directed Teaching	6 units

OPTION 2—A BACCALAUREATE MAJOR IN THE EDUCATION OF THE DEAF INCLUDING CREDENTIAL REQUIREMENTS

An applicant for the credential to teach deaf and severely hard of hearing in special day classes may substitute for the regular general teaching credential an acceptable bachelor's degree and 10 semester hours of acceptable professional work in education required for a regular general teaching credential. These 10 hours should be selected with the consent of your adviser. The following major leads to a bachelor's degree and a credential to teach the deaf.

Lower Division

No professional courses in education taken at a junior college will be accepted.

Upper Division

All courses listed under Option 1

Education 300—Introduction to Credential Programs (N. Cr.)

Selected education courses required for regular teaching credential (10 units)

Other Programs in Special Education

Gifted Children

The State has not outlined special credential requirements for teachers of gifted children. Students who are interested are advised to consult the Head of the Department of Special Education for suggested courses.

Emotionally Disturbed Children

No special credential is required to teach children with behavior disorders. Students interested in this type of work are advised to consult the Head of the Department of Special Education for suggested courses

MASTER OF ARTS DEGREE IN SPECIAL EDUCATION

The master of arts degree in special education is intended to prepare administrators, teachers, and therapists for work with exceptional children. The candidate for a master's degree may incorporate as part of his program the requirements for a credential in his area of specialization. The program is planned with sufficient flexibility to permit structuring of program in terms of the candidate's particular needs.

Applicants are required to obtain approval of the Department *prior* to admission to the program. Admission steps are as follows: (1) admission to the college as a matriculated student (2) completion of the required graduate qualifying examination (3) completion of Department application including references, etc.

1. Prerequisites
 - a. Graduate standing.
 - b. Oral conference prior to acceptance for candidacy.
2. Completion of requirements for California credential in special education in area of candidate's choice.
3. Required courses
 - a. Basic Core 8-11 units
 - Education 488—Psychology and Education of Exceptional Child (or equivalent) (3)
 - Education 534—Seminar in Special Education (3)
 - Education 588—Problems and Practices in Special Education (2)
 - †Selected graduate course (3)
 - b. Select, in consultation with adviser, appropriate offerings from the following 8-13 units
 - Selected courses in area of specialization; graduate seminar in area of specialization; field work.
4. Outside the field of education 6 units
 - (Courses must be not only outside the Division of Education but also not required on the credential in the candidate's area of specialization.)
5. Electives to complete 30 hours 0-8 units
6. Comprehensive examination.

MASTER OF ARTS DEGREE IN SPEECH CORRECTION AND AUDIOLOGY

For the requirements for the Master's degree in Speech Correction and Audiology see Catalog, page 380.

† Qualified students may petition the department head to substitute a graduate project for this requirement.

GUIDANCE AND PUPIL PERSONNEL SERVICES

STAFF: Stewart (Department Head), Bilovsky, Cantrell, Cheresch, Heywood, Matson, Morman, Mortensen, Nugent, Somers, Stubbins.

General Pupil Personnel Services Credential

Los Angeles State College is authorized to recommend candidates to the State Department of Education for the following areas of specialization of this credential: Pupil counseling, welfare and attendance, school psychometry, and school psychology. Previous school service credentials in this area are no longer issued initially.

Admission Requirements

Before a student is admitted officially to this program he must be approved by the General Pupil Personnel Services Credential Committee. (He may be admitted simultaneously to the M.A. program in guidance.) Steps are as follows: (a) obtain preliminary advisement; (b) request admission to college, including a credit summary; (c) take graduate qualifying examination, (d) complete application forms (an appointment with an interviewing committee will be made after completing a, b, c, and d); (e) complete interview; (f) receive written notification of action of committee (if approved, the candidate will be assigned an adviser.)

Pending approval the candidate should register for only 300 or 400 courses. As this program of course work and field experiences is a supervised internship, it is required that prospective candidates complete admission requirements at the beginning of training.

Field Work. Before a student may take courses meeting the field work requirement, he must (a) be an approved candidate, (b) have completed 2 units of work at this college, and (c) be recommended by adviser and be reapproved by GPPS Credential Committee.

Applications for field work must be filed in the office of the Department of Guidance and Pupil Personnel Services by December 15 or April 15 in the semester preceding the one in which field work will be taken.

Credential Requirements

An applicant for this credential shall have completed a specified experience and training program, including the following requirements:
A bachelor's degree from an accredited institution.

Two years of successful teaching experience, or one year of successful teaching experience and one year of supervised field experience in pupil personnel activities with school-age pupils, or two years of supervised field experiences in school social work, school psychometry, or school psychology of which at least one year shall have been in a public school.

3. Completion of a minimum of 30 semester hours of postgraduate work of upper division or graduate level courses including at least *one* specialized area, and a supervised internship.

General Courses Required

The requirements for the General Pupil Personnel Services Credential have been revised recently. See an adviser in the Department of Guidance and Pupil Personnel Services for course requirements.

Health and Development Credential—School Nurse

Students wishing to secure this credential should check with the Head of the Nursing Department for the list of required courses. Upon completion of these required courses, the student may secure his credential by direct application to the State Department of Education.

Master's Degree Programs

The master's degree programs have recently been revised. See an adviser in the Department of Guidance and Pupil Personnel Services.

MASTER OF SCIENCE PROGRAM IN REHABILITATION COUNSELING

The two year graduate curriculum in rehabilitation counseling is supported, in part, by a grant from the Office of Vocational Rehabilitation, Department of Health, Education and Welfare.

The rehabilitation counselor helps physically or mentally disabled persons to appraise their interests and abilities and understand their needs, so they can develop and carry out plans leading to more satisfactory, independent lives. He typically finds employment in a vocational rehabilitation agency, rehabilitation center, hospital, sheltered workshop and other private agencies. Career opportunities for rehabilitation counselors are expanding rapidly. Increased public awareness of the needs of the disabled, changes in legislation and expanding public programs in vocational rehabilitation have created a high demand for professionally trained persons.

Traineeship grants of \$1,800 for first year students and \$2,000 for second year students, per academic year, are available to qualified full-time students in the training program.

Undergraduate studies should preferably have been in such social science programs as psychology, sociology, anthropology or education.

Early in the year in which the candidate plans to enter training, he should seek an interview with one of the advisers. For further information regarding the graduate program in rehabilitation counseling, request the Bulletin of Information from the Co-ordinator, Rehabilitation Counseling Program. The deadline for filing applications for the fall semester is April 1.

Advancement to Candidacy

Reference is made to the *Graduate Bulletin* which details the requirements for advancement to candidacy.

The requirements for the Master of Science Degree in Rehabilitation Counseling have been revised recently. See an adviser in the Rehabilitation Counselor Training Program for new course requirements.

Field Work

The Los Angeles metropolitan area provides unusual facilities for field work experiences. The number and variety of rehabilitation agencies in the area are unparalleled on the West Coast. The major rehabilitation agencies have agreed to co-operate with the Los Angeles State College program. A student wishing to take Types B and C field work must indicate his intention on a form provided by the Supervisor of Field Relations, no later than April 15 for the fall semester and no later than November 1, for the spring semester.

The field work experiences may be grouped about three phases:

- A. *Directed Observation.* The student will visit a variety of rehabilitation agencies to give him a broad view of the varied agency settings, types of clients, and methods of rehabilitation encountered.
- B. *Practice in Specific Diagnostic and Counseling Functions.* The student will be given practice under agency supervision in carrying out such specific tasks as intake interview, determining eligibility for service, taking a case history, administering objective tests, etc.
- C. *Practice in Rehabilitation Counseling.* During this phase, the student will assume the level of responsibility normally given the counselor in the particular agency. He will be responsible for integrating medical, psycho-social, and vocational data about the client, using such data appropriately in the counseling process; conferring with other professionals and agencies; and taking necessary steps to facilitate his client's vocational adjustment.

ADMINISTRATION AND SUPERVISION

STAFF: Ostlie (Department Head), Benedetti, Bishop, Hall, Hanson, Hoover, Kloepper, Prindiville, Sparks, Tonge, Tozier, Van Winkle.

Students enrolling in courses in administration and supervision should indicate as early as possible the credentials for which they are working. No person will be considered a candidate for a credential until an evaluation has been requested by the student and has been processed by the college. Prospective credential candidates must have an adviser in the Department of Educational Administration and Supervision.

Field Work in School Administration

Courses in field work, Education 565AB and Education 566AB, are full-year courses carrying two units of credit each semester. Field work students register in the fall semester for the A section and must reregister in the spring semester for the B section.

Prerequisites. Education 565AB and Education 566AB may be taken only after the student has met the following criteria:

1. At least three years of successful teaching experience must be verified by letter from the principal, supervisor, or superintendent.
2. Personal qualifications indicating probability of successful administrative or supervisory work must be verified by a principal, supervisor, or superintendent. The recommendation from a practicing administrator or supervisor will be required of all candidates prior to assignment to field work.
3. The student, to be approved for field work, must have been regularly admitted to the college as a graduate student (fully matriculated).
4. Twelve units of work in education, not including prerequisites, but including Education 560, 563, 570 or Education 576, must be completed before field work can be undertaken. At least six of these units must be in residence at Los Angeles State College.
5. The applicant should have at least one year's teaching experience in the school in which he is to do field work.

(Students seeking enrollment in field work (Education 565AB and Education 566AB) must make application through the Department of Educational Administration and Supervision prior to July 1. If approved, the student's name is placed on an eligibility list permitting initial registration for the fall term.)

The Department of Educational Administration and Supervision reserves the privilege of making exceptions to the above policies and procedures, but will do so only for exigent reasons.

Field Work in School Supervision

Courses in field work, Education 565AC and Education 566AC, are full year courses carrying two units of credit each semester. Field work students must register in the fall semester for the A section and must re-register in the spring semester for the C section.

Prerequisites: Education 565AC and Education 566AC may be taken only after the student has met the following criteria:

- (1) Written verification of desirable personal characteristics for supervision by two persons who have been associated with the applicant in a school administrative or supervisory relationship within the past five years;
- (2) Approval by the school principal, with assurance that the credential applicant will be given opportunities to sample the various phases of the supervisory process in the school;
- (3) Three years of successful teaching experience;
- (4) Matriculation in the college as a graduate student;
- (5) Completion of twelve semester units of academic credit in the area of concentration including:
 - Educ. 560 Principles and Practices of Curriculum Development
 - Educ. 563 Supervision of Instruction and Curriculum
 - Educ. 570 Organization and Administration of Elementary Schools or
 - Educ. 576 Organization and Administration of Secondary Schools
- (6) Assignment to a school building for a second year, preferably with same principal, in order to merit consideration through the establishment of desirable and effective working relationships with principal and faculty. In cases in which a principal who has approved an applicant moves to another school building before the field work begins, the applicant should confer with his advisor.

(Students seeking enrolment in field work must make application through the Department of Educational Administration and Supervision prior to July 1. If approved, the student's name is placed on an eligibility list permitting initial registration for the fall term.)

Elementary Administration Credential

The requirements listed below must be met by all students who expect recommendation for the elementary school administration credential.

1. Possession of a valid general elementary school credential.
2. Three years of successful teaching experience in elementary schools.
3. Thirty semester hours of upper division or graduate work in addition to the holding of the general elementary credential.
4. Education 409 and Education 480 or their equivalent.
5. Completion of the following courses:

Education 560—Principles and Practices of Curriculum Development	3 units
Education 563—Supervision of Instruction and Curriculum	3 units
Education 565AB—Field work in Elementary School Administration and Supervision	4 units
Education 570—Organization and Administration of the Elementary School	3 units
Education 572—Law and Public School Organization	3 units
Education 573—School Finance and Business Management	3 units
Electives selected with the adviser	11 units

(Students studying for an administration or supervision credential should consult requirements for the master of arts degree in these areas. Both programs can be carried on at the same time. See page 149.)

Secondary Administration Credential

The requirements listed below must be met by all students in Los Angeles State College who expect recommendation for the secondary school administration credential.

1. Possession of a valid general secondary credential.
2. Three years of successful teaching experience.
3. Nineteen semester hours of graduate work in addition to fulfilling requirements for the general secondary credential and prerequisites.
4. Education 409 and Education 480 or their equivalent.
5. Completion of the following courses:

Education 560—Principles and Practices of Curriculum Development	3 units
Education 563—Supervision of Instruction and Curriculum	3 units
Education 566AB—Field Work in Secondary School Administration and Supervision	4 units
Education 572—Law of Public School Organization	3 units
Education 573—School Finance and Business Management	3 units
Education 576—Organization and Administration of the Secondary School	3 units

The Supervision Credential

The requirements listed below must be met by all students requesting recommendation for the school supervision credential.

1. Possession of an acceptable bachelor's degree and a valid regular California credential.
2. Verification of five years successful public school service.
3. Educ. 409 and Educ. 480, or their equivalents.
4. Meeting the specific prerequisites listed for field work, Educ. 565AC and Educ. 566AC.
5. Completion of not less than 24 semester hours including:

Educ. 560—Principles and Practices of Curriculum Development	3 units
Educ. 563—Supervision of Instruction and Curriculum	3 units
Educ. 565AC—Field Work in Elementary School Supervision or	
Educ. 566AC—Field Work in Secondary School Supervision	4 units
Educ. 570—Organization and Administration of Elementary Schools or	
Educ. 576—Organization and Administration of Secondary Schools	3 units
Educ. 574—Legal and Financial Aspects of Supervision	3 units
Electives to be selected with approval of adviser	8 units
(at least 2 of these must be in education.)	
Total Credential Program	24 units

MASTER OF ARTS DEGREE IN ELEMENTARY SCHOOL ADMINISTRATION

The primary objectives of the master's degree in elementary school administration are to provide students who have the potential for becoming successful administrators or supervisors the opportunity (1) to study and experience the basic problems faced by administrators and supervisors at the local *school* level so as to insure initial competence in administering or supervising such schools; (2) to obtain an understanding and appreciation of educational problems at the school district, county, state, and national levels, as these problems relate to the successful operation of a local school; (3) to increase the quality of perception in working with pupils, fellow educators, and community members.

1. Prerequisites:
 - a. Graduate standing.
 - b. General elementary teaching credential.
 - c. Three years of successful teaching experience.
 - d. Education 409, Education 480.
2. Area of specialization:

Education 507—History and Philosophy of Education <i>or</i>	
Education 525—Educational Sociology	3 units
Education 560—Principles and Practices of Curriculum Development	3 units
Education 563—Supervision of Instruction and Curriculum	3 units
Education 565AB—Field Work in Elementary School Administration and Supervision	4 units
Education 570—Organization and Administration of the Elementary School	3 units
Education 572—Law and Public School Organization	3 units
Education 573—School Finance and Business Management	3 units
Education 598—Seminar in Educational Administration <i>or</i>	
Education 599AB—Graduate Project	3 units
3. Outside the field of education
Select in consultation with adviser..... 6 units
4. Comprehensive examination

MASTER OF ARTS DEGREE IN SECONDARY SCHOOL ADMINISTRATION

The primary objectives of the master of arts degree in secondary school administration are to provide students who have the potential for becoming successful administrators or supervisors the opportunity (1) to study and experience the basic problems faced by administrators and supervisors at the local school level so as to insure initial competence in administering or supervising such schools; (2) to obtain an understanding and appreciation of educational problems at the school district, county, state, and national levels, as these problems relate to the successful operation of a local school; (3) to increase the quality of his perception in working with pupils, fellow educators, and community members.

1. Prerequisites:
 - a. Graduate standing.
 - b. General secondary teaching credential.
 - c. Three years of successful teaching experience.
 - d. Education 409, Education 480.
2. Area of specialization:

Education 507—History and Philosophy of Education <i>or</i>	
Education 525—Educational Sociology	3 units
Education 560—Principles and Practices of Curriculum Development	3 units
Education 563—Supervision of Instruction and Curriculum	3 units
Education 566AB—Field Work in Secondary School Administration and Supervision	4 units
Education 572—Law and Public School Organization	3 units
Education 573—School Finance and Business Management	3 units
Education 576—Organization and Administration of the Secondary School	3 units
Education 598—Seminar in School Administration and Supervision <i>or</i>	
Education 599AB—Graduate Project	3 units
3. Outside the field of education
Select in consultation with adviser..... 6 units
4. Comprehensive examination

MASTER OF ARTS DEGREE IN SUPERVISION

The primary objectives of the masters' degree in school supervision are to provide interested and qualified students the opportunity:

- (1) To obtain an educational and cultural background appropriate and conducive to competence in supervision.
- (2) To extend his knowledge and understanding of the issues, purposes, problems and methods of supervision.

1. Prerequisites:

- a. Graduate standing
- b. A regular California teaching credential
- c. Education 409 and Education 480
- d. Three years of successful public school teaching experience by the time of completion of other requirements.

2. Area of Specialization:

- a. Educational Investigation and report 2 units
- b. Select *two* from the following 6 units
 - Ed. 507—History and Philosophy of Education 3 units
 - Ed. 510—Advanced Educational Psychology 3 units
 - Ed. 525—Educational Sociology 3 units
- c. A minimum of four units in the appropriate supervisory field or area with approval of adviser 4 units
- d. Required core courses 9 units
 - Educ. 560—Prin., Practices of Cur. Develop. 3 units
 - Educ. 563—Supv., Instr. & Curriculum 3 units
 - Educ. 598—Sem. Sch. Adm. & Supv. 3 units

3. Outside the field of education 6 units (Select with approval of adviser)

4. Elective, either in or outside the field of education 3 units (Select with approval of adviser)

5. Comprehensive Examination.

COURSES OF INSTRUCTION

Prerequisite: Upper division standing for all education courses.

300 Admission to Credential Programs (N. Cr.) Fall, Spring

Required of all students qualifying for a teaching credential. Fulfills state requirements for selection of students entering teacher credential curricula.

412 Principles, Curriculum, and Methods in Elementary School (8) Fall, Spring

Prerequisite: Education 413. Laboratory course covering principles, curriculum, methods, and materials of elementary school instruction, with major emphasis on reading, language arts, arithmetic, social studies, and science. Attention given to modern methods of teaching elementary school subjects required by the laws of California; includes audio-visual methods. Students observe and participate in selected elementary school classrooms one-half day per week. Required of all candidates for general elementary credential. (Includes material covered in Education 490.)

402 Growth and Development (2) Fall, Spring

Prerequisite: Psychology 101 or 150, or consent of instructor. Study of the child from 6 to 18 with emphasis on physical, motor, social, intellectual, and emotional growth and development. Observation of children. Credit may not be secured for both Education 402 and Psychology 412.

404 Human Development (2) Fall

Physical, psychological, and sociological factors affecting growth and development through the life span; the course emphasizes the normative approach as a basis for understanding the individual.

405 Kindergarten-primary Education (4) Fall, Spring

Prerequisite: Education 300. Principles, curriculum, materials, and methods of the kindergarten and first three grades. Guidance procedures and techniques of parent education.

406 Principles of Education (2) Fall, Spring

The modern public school; its history and development; its objectives and operations; its functions as a social agency. Credit may not be secured for both Education 406 and 471 or 412.

409 Tests, Measurements and Evaluation (2) Fall, Spring

Construction and use of teacher-made objective examinations; selection and interpretation of standardized tests; elementary statistical techniques; practical approaches to evaluation of instruction.

410 Educational Psychology (3) Fall, Spring

Application of psychological research and theory; major attention devoted to problems of learning, individual differences, child capacities, and behavior as revealed in school environment.

413 Psychological and Sociological Foundations of Education (5) Fall, Spring

Child and adolescent growth and development, educational psychology, mental hygiene, and educational sociology, as these are foundational to the development of effective elementary and secondary school teachers. This course is equivalent to Education 402 and 410, and Psychology 301.

414 Methods of Teaching Spanish in the Elementary School (2)

Teaching methods, instructional materials, and evaluate techniques for a modern program of teaching the Spanish language to children in elementary school.

415-419 Teaching in the Elementary School

415 Teaching Arithmetic in the Elementary School (2) Fall, Spring

416 Teaching Social Studies in the Elementary School (2), Fall, Spring

417 Teaching Language Arts in the Elementary School (2) Fall, Spring

418 Teaching Science in the Elementary School (2) Fall, Spring

419 Teaching Reading in the Elementary School (2) Fall, Spring

Prerequisites: Education 412 and Education 413, or equivalent. The above courses are designed for teachers with experience who possess their B.A. degree and a credential. These courses do not meet the requirements for elementary education major or the M.A. degree in elementary teaching. Each course provides for intensive study of the particular subject area, gives an opportunity for exploration, analysis, and interpretation of modern teaching trends and issues; permits concentrated study of specific problems and methods as encountered by experienced teachers. Not more than a total of four units in the above series will be accepted for degree credit after completion of Education 412.

420 Speech Reading (2) Fall, Spring

Principles and methods of teaching speech reading or lipreading. Discussion of vocabulary development material and preparation of source collections for various groups.

421A-B Language for the Deaf (3-3) Fall, Spring

Prerequisites: "A"—consent of instructor; "B"—Educ. 421A. Brief history of education of the deaf; natural acquisition of language in children who have normal hearing; fundamentals and techniques for developing and building language with children who are deaf from preschool throughout school age levels. Lipreading for deaf children as necessary to receptive language development in oral education.

422A-B Speech for the Deaf (3-3) Fall, Spring

Prerequisites: "A"—consent of instructor; "B"—Educ. 422A. Brief survey of methodology of education of the deaf; development of oral communication for the child who is deaf. Detailed study of the essentials of good speech and of methods of building or correcting the speech of the deaf. Procedures for developing use of residual hearing.

423 Survey of Physical Defects (3) Fall

Physical defects commonly found among orthopedically handicapped children; implications for education and treatment.

424 Braille (3) Fall

Practice in reading and writing Braille; methods and techniques for teaching Braille.

425 Introduction to Vision (3) Fall

Anatomy, physiology and hygiene of eye; common visual defects found among children; principles of vision screening and problems of adjustment to visual handicaps.

427 Hearing and Its Measurement (3) Fall, Spring, Summer

Theory and technique of pure-tone threshold and screening audiometry; physics of sound as related to hearing measurements; anatomy,

physiology, and pathology of the ear. Designed to provide basic knowledge of pure-tone audiometry and fundamental knowledge of the hearing process. Acceptable for public school audiometrist certificate.

428 Speech Audiometry and Aural Rehabilitation (3) Fall, Spring
Prerequisite: Education 427. Interpretation and use of the puretone audiogram and the results of speech audiometry as guides to educational procedures and management. Formant theory and the application of phonetic analyses in the evaluation of hearing loss. Instruction in making full use of residual hearing in remedial programs including knowledge of amplification equipment.

435 Diagnosis and Remedial Reading Procedures (3) Fall, Spring
Causes and nature of reading difficulties and procedures for diagnosis and remedial treatment.

440AB Directed Teaching in the Elementary Schools
(4-8) Fall, Spring

Prerequisites for elementary or kindergarten-primary majors: Education 412 and 413. The composite minor must also be near completion before directed teaching is attempted.

See detailed section on directed teaching for further prerequisites.
Directed teaching for kindergarten-primary and elementary credentials.

441 The Teacher in the School and Community (3) Fall, Spring
To be taken concurrently with Education 440. Provides experiences in home-school-community relationships; the school community and its resources; parent-teacher meetings and conferences; effective practices in human relations; legal, ethical, and professional responsibilities of the teacher; the school curriculum in action. Taught by the school principal and the college supervisor. Required for elementary and kindergarten-primary credentials.

442Y-Z Directed Teaching for General Secondary (3-3)
Fall, Spring

Prerequisites: Education 300, 413, 471. The following courses must be taken prior to, or concurrently with, directed teaching: Education 480, 490, 493, and 444YZ.

See the detailed section on directed teaching for other prerequisites. Directed teaching is the culminating experience in the prospective teacher's professional training. Directed teaching is done under the daily supervision and guidance of a qualified training teacher regularly employed in secondary teaching. A designated member of the college staff also assists in general supervision and counseling. Both city and county schools co-operate in the directed teaching program.

443Y-Z Directed Teaching for Junior High School and Special Secondary (3-3) Fall, Spring

Prerequisites: Education 300, 413, 471, 493. The following courses must be taken prior to, or concurrently with, directed teaching: Education 490, 493, 444YZ, and 480 for junior high school credential.

Directed teaching for the junior high school credential and the special secondary in subject fields. Ordinarily taken in the last semester of the senior year.

444Y-Z Problems in Secondary Teaching (1-2) Fall, Spring

Must be taken concurrently with directed teaching. Classroom problems arising in connection with student teaching, and problems which arise as part of a teacher's total school responsibility. (Music majors only in 444Z will focus on observation in elementary school.)

445Y-Z Observation in Special Education (1-2) Fall, Spring

Prerequisite: Consent of instructor. Provides an opportunity for first-hand experience with educational programs in special education. Observation should precede or be taken concurrently with Education 446. Candidates for the credential to teach the deaf must elect Ed. 445Z (2) for directed observation, which is correlated with Ed. 421 and 422.

446Y-Z Directed Teaching in Special Education (4-6) Fall, Spring

See detailed section on directed teaching for description of criteria for admission to directed teaching (pages 143-145). Directed teaching is the culminating experience in the professional training sequence. The experience is under the daily supervision and guidance of a qualified teacher working in special education. A member of the college staff assists in supervision and counseling. Both city and county schools cooperate in the special education program.

460 Education of Children With Visual Handicaps (3) Spring

Problems of instruction of visually handicapped children: special methods in Braille and sight conservation, curriculum adjustments, classroom problems including social adjustment and recreation.

461 Methods of Teaching Crippled Children (3)

Prerequisites: Education 423 and 488. Problems in adaptation of methods to meet the needs of the child with limitations resulting from crippling conditions.

462 Teaching Elementary School Subjects to the Deaf (2) Fall

Prerequisites: One course in language for the deaf and Education 412 or equivalent. Problems and techniques of adjusting elementary school curriculum to the needs of deaf children.

463 Teaching Reading to the Deaf (2) Spring

Prerequisite: One course in language for the deaf. Techniques of teaching reading to deaf children.

464 Teaching Secondary Subjects to Deaf (2) Spring

Prerequisite: Educ. 471 or equivalent. Special problems of adjusting the secondary school curriculum to the needs of deaf children.

467 Methods of Teaching Mentally Retarded (3) Fall, Spring

Prerequisites: Educ. 412 or 471; recommended prerequisite: Psychology 406. General characteristics of the mentally retarded and their implications for learning and teaching. Methods and teaching techniques. Development of curriculum materials and teaching devices.

470 Curriculum in Secondary Education (2) Spring

Prerequisites: Education 406, 413, or consent of instructor. Curriculum in secondary education in the United States. Aims and scope of modern secondary school practices and current issues in curriculum development. Credit may not be secured for both Educ. 470 and 471.

471 (371) Secondary Education: Principle, Curriculum, and Evaluation (5) Fall, Spring

Prerequisites: Junior standing and Education 300 and 413 concurrently or before. Principles and philosophy of secondary education in the United States; organization, curriculum, evaluation, and teaching practices for secondary schools. Observation-participation in junior and senior high schools. (Equivalent to Educ. 406, 409, 470.)

472 Problems in the Junior High School (2) Fall, Spring

Prerequisite: Possession of a junior high school credential, or consent of the instructor. The unique problems of the American junior high school. Designed for experienced junior high school teachers and administrators.

473 Developmental Reading in the Secondary School (2) Fall, Spring

Prerequisite: Possession of a general secondary or junior high school credential, or consent of instructor. Techniques and procedures for improving and extending the reading habits, skills, and interests of secondary students.

475 Curriculum Construction for Adult Classes (2) Fall

Selection and organization of subject matters for mature students; organization of concise teaching units; definition of educational goals; selection of supplementary and reference material.

476 Methods and Procedures in Teaching Adults (2) Fall, Spring

Effective methods of teaching adults, basic methods of adult education, relationship of subject matter and teaching methods. Lectures, demonstrations, and discussions. Required for renewal of special adult education credential.

478 Organization, Administration and Supervision of Adult Education (2) Spring

Procedures for administration and supervision of classes and schools for adults.

479 History and Philosophy of Adult Education (2) Spring

Basic principles of adult education; social and philosophical significance of adult education; history and description of past and present movements in adult education.

480 Fundamentals of Counseling and Guidance (2) Fall, Spring

Prerequisite: Education 413 or equivalent. General orientation to those factors involved in better understanding of individual students; basic principles and practices of the pupil personnel program.

481 Counseling and Guidance Procedures in Adult Schools (2) Spring

The nature of the problems of adult students; the counselor's role in adult education; practicum in counseling methods and techniques.

482A Factors in Vocational Adjustment (3) Fall

Covers the knowledges useful to the understanding of vocational choice and the vocational life process.

482B Occupational Analysis and Information (3) Spring

Classification of occupations according to various criteria; community and national occupational surveys; job analysis. Classifying occupational information for counseling purposes; its use in the counseling process.

484 School-Family Interpersonal Relations (3) Fall, Spring

Prerequisite: Substantial background in educational psychology, psychology, or sociology. Dynamics of family, pupil-teacher, teacher-parent, and pupil-pupil relationships, including methods and materials of family counseling, group work, home visits, parent conferences, and problems of home and school.

485 Laws Relating to Children and Child Welfare (3) Fall, Spring

Problems of child welfare and attendance; application of federal, state, and local laws relating to education, employment, health and welfare of school-age children.

487A-B Medical Aspects of Disability (2-2) Fall, Spring

Prerequisite: Consent of instructor. Etiology, therapy, and prognosis of the major physical and psychiatric disabilities. Assessment of physical capacities and limitations. Typical restorative techniques.

488 Psychology and Education of the Exceptional Child (3) Fall, Spring

Nature, degree, and incidence of conditions which differentiate a child from the normal pattern sensorially, neurologically, physically,

mentally, or psychologically. California state laws in relation to the identification and education of the deviate. Special problems of counseling the handicapped. Field trips.

489 Teacher Guidance for Exceptional Children (2)

Prerequisites: Education 488 and the foundation course in the student's area of specialization. Problems of personal adjustment and vocational guidance affecting the physically, mentally, and socially handicapped and their families.

490 Audiovisual Instruction—Methods and Techniques (2)

Fall, Spring

Prerequisites: For credential candidates: Education 413 and either Education 412 or Education 471, or previous teaching experience. Methods and techniques of using audiovisual materials and equipment; variety, scope, sources, selection, teaching techniques, and evaluation of materials. Training in operation of equipment. One hour laboratory per week required.

491 Principles of Business Education (3) Fall, Spring

Aims, scope, organization, administration, and teaching of business education in secondary schools; student-teacher relationships; business-education curriculum; modern trends in business education.

492 Education of Children With Special Abilities (3)

Research findings on the nature of differential aptitudes and personality characteristics of gifted children; methods of identification, acceleration, grouping, and enrichment. Special attention to evaluation of programs, problems of underachievement, counseling, scholarships, and conservation of talent.

493 Methods and Materials in Secondary School Subjects (2)

Fall, Spring

Prerequisite: Education 413 and 471, concurrently or before. A series of professional courses intended for prospective secondary school teachers in indicated subject fields. Each course will include consideration of objectives, methods, materials, and problems involved in teaching in the particular field; observation in junior and senior high school. Each candidate for a secondary credential must complete appropriate methods course in his major and minor. The methods course should be taken prior to Education 442.

- 493A Methods of Teaching Art.
- 493Bb Methods of Teaching Bookkeeping and Related Subjects.
- 493Bt Methods of Teaching Typewriting.
- 493FL Methods of Teaching Foreign Language. (Fall only.)
- 493HE Methods of Teaching Home Economics.
- 493H&S Methods of Teaching Health and Safety Education.
- 493IA Methods of Teaching Industrial Arts.
- 493LA Methods of Teaching Language Arts.
- 493Ma Methods of Teaching Mathematics.

493MuA Methods of Teaching Instrumental Music. Prerequisites: Music 210, 211, 212, and 213. (May be taken concurrently.)

493MuB Methods of Teaching Choral Music. Prerequisites: Music 381 and 340.

493MuC Methods of Teaching Elementary Music. Prerequisite: Music 340 or consent of instructor.

493N Methods of Teaching in Nursing.

493PE Methods of Teaching Physical Education.

493Sc Methods of Teaching Science.

493SS Methods of Teaching Social Studies.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

500 Educational Investigation and Report (2) Fall, Spring

Methods employed in educational research. Critical analysis of educational literature on the problems encountered by teachers, administrators and other school personnel. Planning of investigations in problem areas of interest to students. Credit cannot be given for both Education 500 and Education 599A.

507 History and Philosophy of Education (3) Fall, Spring

Prerequisite: Graduate standing or consent of instructor. Historical development of education. Special attention to philosophies of education at each of its various levels.

510 Advanced Educational Psychology (3) Fall, Spring

Prerequisites: Education 410 or 413 and graduate standing. Recent and outstanding contributions in research, practical experimentation, and theory which apply to the field of educational psychology.

511 Research in Elementary School Mathematics (2) Fall

Prerequisite: Experience as an elementary school teacher. Analysis of published research on teaching and learning of mathematics in the elementary school.

512 Research in Elementary School Social Studies

(2) Fall, Spring

Prerequisite: Experience as an elementary school teacher. Analysis of published research on the teaching and learning of social studies in the elementary school.

513 Research in Elementary School Reading (2) Fall, Spring

Prerequisite: Experience as an elementary school teacher. Analysis of published research on the teaching and learning of the reading process.

514 Research in Elementary School Language Arts (2) Spring

Prerequisite: Experience as an elementary school teacher. Analysis of published research on the teaching of the language arts (except reading) in the elementary school.

515 Research in Elementary School Science (2) Fall, Spring

Prerequisite: Experience as an elementary school teacher. Analysis of published research in science teaching at the elementary school level.

525 Educational Sociology (3) Fall, Spring

Application of insights of social sciences, especially sociology, to problems of today's culture-centered school. Areas include: the individual in the group, social classes, the family, the community, politics, school economics, social psychology, and social philosophies.

530 Advanced Study in Child Development (3) Fall, Spring

Prerequisites: Education 413, Education 402, or equivalent, and at least one year's teaching experience. Recent and outstanding contributions in research, practical experimentation, or theory which have important bearing upon the problems of human development; the significance of the developmental approach to the education of children.

531 Seminar in Elementary Education (3) Fall, Spring

Prerequisite: Completion of, or concurrent enrollment in, last semester of program for the master of arts degree in Elementary Teaching or consent of instructor. Identification and analysis of persistent problems in elementary education.

532 Seminar in Secondary Education * (3) Fall, Spring

Prerequisites: Secondary teaching credential and consent of instructor. Identification and analysis of persistent problems in secondary education.

534 Seminar in Special Education (3) Fall, Spring

Prerequisite: Education 488. Review of studies and investigations relating to the problems of adjustment to physical handicaps.

535 Seminar in Mental Retardation (3) Spring

Prerequisite: Psychology 406. Review of studies and investigations in the learning and adjustment problems of retarded children.

536 Seminar in Hearing (3)

Prerequisites: Education 427 and 428, or consent of instructor. Review of scientific studies and investigations of hearing and hearing problems. Technical problems of providing effective rehabilitation of the hard of hearing and deaf.

* Ordinarily taken by candidates for the master of arts degree during the semester in which the degree requirements are completed.

538 Diagnosis in Vocational Counseling (3) Fall

Prerequisites: Psychology 430 and Education 482A. Clinical methods of individual appraisal are reviewed and their usefulness in vocational diagnosis evaluated. Individual dynamics through case studies.

545A-B Field Work in Special Education (3-3)

Supervised field training in problems relating to classroom instruction, supervision and administration. Special assignments in schools, diagnostic centers and community agencies.

548 Directed Teaching in the Junior College (4) Spring, Fall

Prerequisites: Education 561, or its equivalent, and approval of the Co-ordinator, Junior College Education. Directed teaching is the culminating experience in the professional training program for the junior college credential.

553 The Core Curriculum in Junior and Senior High Schools

(2) Fall, Spring

Prerequisite: Possession of a secondary credential or the consent of instructor. Analysis of problems and programs involving integrated social studies, language arts, and other secondary curriculum. Trends in the core program.

554 Problems of High School Students (2) Fall, Spring

Prerequisite: Possession of a secondary credential and secondary teaching experience. Designed for practicing junior and senior high school teachers. The typical problem of dating, family relationships, financial planning, military service; special adolescent problems within classrooms as presented by individual teachers.

556 Seminar for Beginning Teachers (2) Fall

Restricted to teachers with less than four years experience. Problems that are met and reported by beginning teachers. Designed to help beginning teachers make a satisfactory start in the schools in which they begin their teaching.

560 Principles and Practices of Curriculum Development

(3) Fall, Spring

Prerequisites: Basic methods courses in elementary and secondary education. Critical examination of curricular trends in light of historical perspective, sociological change, research in child growth and basic philosophies; consideration of objectives, practices, materials, and evaluation inherent in the curriculum development process.

561 The Junior College (3)

Prerequisite: Consent of instructor. History, aims and functions, organization, and curriculum of the junior college. Required of students seeking the junior college teaching credential.

562 Instruction in the Junior College (3)

Prerequisite: Education 561 or junior college teaching experience. Psychological and developmental characteristics of junior college students and principles of learning pertinent to this level; methods of evaluation; audio-visual methods. Recommended for students seeking the junior college teaching credential.

563 Supervision of Instruction and Curriculum (3) Fall, Spring

Prerequisites: Education 560 and successful teaching experience. With department approval Education 560 and 563 may be taken concurrently. Brief history of the rise and development of supervision; relationship of supervision and administration; interpretation of concepts and techniques of modern supervision including effective communication.

565A-B-C Field Work in Elementary School Administration and Supervision (2-2) Year course

Prerequisite: Admission by application. Direct participation in administrative, supervisory and curricular experiences at the local school or district level. For administrative credentials and master's programs, take 565A-B; for credential and master's program in supervision, take 565A-C.

566A-B-C Field Work in Secondary School Administration and Supervision (2-2) Year course

Prerequisite: Admission by application. Direct participation in administrative, supervisory and curricular experiences at the local school or district level. For administrative credentials and master's programs, take 566A-B; for credential and master's program in supervision, take 566A-C.

569 Seminar for Elementary Supervising Teachers

Prerequisites: Possession of an elementary credential; service or appointment to serve, as a supervising teacher, or supervisor of student teachers. Designed to fill the special needs of supervising teachers responsible for the supervision of student teachers in off-campus schools. Examination of techniques necessary to an effective supervisory program for associate teachers.

570 Organization and Administration of Elementary Schools (3) Fall, Spring

Study and evaluation of the organization and administration of elementary schools; origin and development of general principles and practices; relationship and interaction with other administrative units with specific emphasis on the local district unit; specific practices and policies of administering and supervising staff, instructional activities, noninstructional activities, relationships and interaction with other community agencies; trends and developments in modern elementary education.

572 School Law and Public School Organization (3) Fall, Spring

Organization and legal aspects of federal, state, county, and district school administration; division of responsibility between school boards and administrators; legal rights, duties, and responsibilities of school districts, officers, employees, pupils, and parents.

573 School Finance and Business Management (3) Fall, Spring

Theory and practice of financing public education; development of guiding principles in educational finance; trends and needs in local, state and federal participation in school support. Local operating procedures of budgeting, accounting and auditing of school funds; purchasing, distribution and management of supplies; planning, maintenance, and operation of school plant.

574 Legal and Financial Aspects of Supervision (3) Spring

Prerequisite: Graduate standing. Legal and financial aspects of supervision designed for instructional personnel including teachers, consultants, special and general supervisors. Satisfies requirements for state supervision credentials. This course does not meet state requirements for administrative credentials.

**576 Organization and Administration of Secondary Schools (3)
Fall, Spring**

Study and evaluation of the organization and administration of secondary schools; origin and development of general principles and practices; relationship and interaction with other administrative units with specific emphasis on the local district unit; specific practices and policies of administering and supervising staff, instructional activities, noninstructional activities, relationships and interaction with other community agencies; trends and developments in modern secondary education.

577 Personnel Problems in School Administration (2)

Analysis of major administrative problems relative to employed personnel in the public school; selection and placement of employees, conditions of service, teacher and employee tenure, retirement provisions, salary schedules, personnel records and reports, legal aspects of personnel problems, professional ethics, teacher-certification, in-service training, and professional organizations.

579 School Building Planning (2) Fall, Spring

Problems related to the financing of school construction; relation of community sociological and economic factors to site solution and the master plan for the school plant; relationship between the instructional program and the development of school buildings; working relationships of personnel involved in the planning and constructing of school buildings; administration of the school construction project including bids, contracts, and insurance.

580 Seminar in Techniques of Counseling (3) Fall, Spring

Prerequisites: Education 480 and Psychology 430. Advanced course in counseling techniques; study of counseling problems and situations; analysis of recorded interviews; demonstrations and practice in counseling.

581 Seminar in Pupil Personnel Services (3) Fall, Spring

Prerequisite: Education 480. See Education 586A. Comprehensive study of the organization, administration, and evaluation of pupil personnel services.

582 Seminar in Guidance (3) Fall, Spring

Prerequisites: Education 580, Psychology 430, and consent of instructor. See Education 586B. Intensive study of case data, current research, sources and uses of educational, vocational, and personal information as applied to school-age pupils.

585 Seminar in School Child Welfare Services (3) Fall, Spring

Prerequisites: Education 485 and consent of instructor. See Education 586B. Social services in the school; special tools and techniques needed for school social service. Procedural problems in home visitations, parent conferences, the interview, and recording. School referral procedures and agency-school relationships.

586A-B Field Work in Pupil Personnel Services (2-2) Fall, Spring

Prerequisite: Admission by application. See section on field work under GPPS credential. Education 581 must be taken concurrently with 586A; Education 582 or 585 must be taken concurrently with 586B. Supervised field training in organized program for those specializing in pupil personnel services at either elementary or secondary level.

588 Problems and Practices in Special Education (2) Fall, Spring

Prerequisite: Education 488. Problems of organization, administration, and supervision of various types of special education programs. Evaluation of recent, proposed, and needed legislation. Review of current literature. For advanced students and administrators of special education programs.

589A Principles of Rehabilitation (3) Fall

Prerequisite: Consent of instructor. Orientation to vocational rehabilitation; historical, legal, and administrative aspects of rehabilitation; organization of rehabilitation services; overview of knowledges and skills needed by rehabilitation counselors; visits to local rehabilitation agencies. Should be followed by Education 589B which continues to outline the scope, philosophy and competencies of rehabilitation counseling.

589B Rehabilitation Counseling (3) Spring

Prerequisites: Education 482A and consent of instructor. Techniques and theories of rehabilitation counseling; use of community resources in counseling; illustrative case studies; current issues in training and professional practice.

590 Advanced Audio-Visual Techniques (2) Fall, Spring

Intensive study of research, advanced techniques, and current practices in audio-visual education.

592 Seminar in Rehabilitation Counseling (3) Spring

Prerequisite: Consent of instructor. Systematic case studies drawn from field work experience. Each student will be required to present one case study to the seminar, and following group criticism, submit a written report of the counseling case.

593 Research in Transitional Work Programs in Rehabilitation (3) Spring

Prerequisite: Consent of instructor. Programs of work therapy in hospitals, rehabilitation centers, and sheltered workshops. Special attention will be given to the organization, staffing, and work procurement in sheltered workshops. The student will be required to develop a project in the field of his special interest.

594 Seminar in Psychological Aspects of Disability (3) Fall

Prerequisite: Consent of instructor. Social-psychological aspects of disability. Individual perceptions of illness and disability. Basic mechanisms and motivation and their relationship to recovery. The effect on self-image of a variety of disabilities.

595A-B Field Work in Rehabilitation Counseling (3-9) Fall, Spring

Prerequisite: Consent of instructor. Supervised professional experience in two or three agencies will be provided to fit the individual needs of the student. Each unit of field work requires approximately 50 hours per semester spent in professional work as the student's field assignment. The deadlines for filing an application for field work with the supervisor of field relations are: *April 15* for the *fall* semester and *November 1* for the *spring* semester.

597 Educational Measurements in Special Education (3)

Prerequisites: Education 409, 488, and the basic courses in student's special field. Interpretation and use of tests and other measurement devices used for the study of exceptional children. This course may not be substituted for the credential requirement of administration of individual psychological tests.

598 Seminar in School Administration and Supervision

(3) Fall, Spring

Prerequisite: Completion of 20 semester hours of graduate work including requirements for field work, unless waived by department head. Intensive study of problems in school administration and supervision. Recommended for all candidates completing the master's program in school administration or supervision.

599A-B Graduate Project (1-2) Fall, Spring

In 599A the student will develop a tentative proposal for the master's project. In 599B the project will be completed with the guidance of a faculty adviser. Students must complete Education 500 or 599A before taking 599B. Enrollment limited to students who have been approved for candidacy for a master's degree in education.

ENGINEERING

(In the Division of Technical Sciences)

STAFF: Cromwell (Department Head), Mann, Plumtree, Risse, Storch (Area Coordinators). Alcalay, Andreoli, Bouse, Coons, Epstein, Giroux, Haberman, Hayworth, Hirsch, Kopp, Leving, Luk, Mano, Minasian, Payse, Rankin, Reisman, Schug, Sikand, Silver, Soclof, Taft. *Part-time*: Andres, Baer, Bradley, Cipriano, Eggers, Flynn, Fruktow, Geselbracht, Gould, Leung, Johnson, MacDonough, Potter, Pudewa, Rubinstein, Schwartz, Sonderling, Solomon, Steinberg.

To meet the needs of industry for engineering personnel, the Los Angeles State College offers a broad engineering program leading to a B.S. in engineering. Technical elective courses are available in mechanical, electrical, and civil engineering.

Instruction is provided in the basic sciences and in engineering methods, processes, materials, machinery, and structures. Classroom instruction may be supplemented by practical engineering experience in the work-study program which is an integral part of the engineering curriculum.

BACHELOR'S DEGREE CURRICULUM

All students are required to take a common core of lower and upper division courses. Technical electives offered permit choice of engineering subjects suited to the professional objectives of the students. The degree requires 132 units.

Lower Division

Mathematics 100, 201, 202, 203.....	12-16 units*
Physics 201, 202, 203—General Physics I, II, III.....	12 units
Chemistry 101—General Chemistry.....	5 units
Engineering 100—Engineering Drawing.....	2 units
Engineering 101—Descriptive Geometry.....	2 units
Engineering 201—Statics.....	3 units
Engineering 206—Orientation Laboratory.....	1 unit
Engineering 207—Materials of Engineering.....	2 units
Electives in engineering or science.....	5 units

Chemistry 102—General Chemistry (5)

Engineering 200—Engineering Processes (3)

Engineering 202—Plane Surveying (3)

Engineering 204—Machine Drafting (2) *or*

Engineering 205—Construction Drafting (2)

(Or an appropriate science or math course)

48 units

Upper Division

The basic requirements are 27 units of required lecture courses plus five units of required laboratories and 18 units of technical electives. All

* Students who satisfy Mathematics 100 by examination are required to take only Math. 201, 202, and 203. They may use the additional four units as electives.

engineering students are required to consult with an adviser in the engineering department before registration.

The required lecture courses are:

Engineering 300—Principles of Electric Circuits	3 units
Engineering 301—Dynamics	3 units
Engineering 302—Strength of Materials	3 units
Engineering 303—Fluid Mechanics	3 units
Engineering 305—Thermodynamics	3 units
Engineering 307—Principles of Electric Systems	3 units
Engineering 309—Engineering Analysis	3 units
English 306—Technical Report Writing	3 units
Mathematics 302—Advanced Engineering Mathematics	3 units

The required laboratory courses are:

Engineering 310—Electric Circuits Lab.	1 unit
Engineering 312—Strength of Materials Lab.	1 unit
Plus three of the following	3 units

- Engineering 313—Fluid Mechanics Lab. (1)
- Engineering 314—Electric Machines Lab. (1)
- Engineering 315—Heat Power Lab. (1)
- Engineering 317—Electric Devices Lab. (1)
- Engineering 440—Electronics Lab. (1)
- Engineering 441—Electric Communications Lab. (1)

Technical Elective Courses are available as follows (18 units required)*

Mechanical Engineering Courses

- Engineering 401—Kinematics of Mechanisms (3)
- Engineering 403—Principles of Aerodynamics (3)
- Engineering 404—Principles of Turbo-machinery (3)
- Engineering 405—Industrial Heat Transfer (3)
- Engineering 406—Applied Thermodynamics (3)
- Engineering 413—Elements of Machine Design (3)
- Engineering 414—Machine Design (3)
- Engineering 415—Heating and Ventilating (3)
- Engineering 416—Air Conditioning and Refrigeration (3)
- Engineering 417—Introduction to Chemical Engineering (3)
- Engineering 420—Power Plants (3)

Electrical Engineering Courses

- Engineering 430—Advanced Circuit Analysis (3)
- Engineering 431—Electric Communications (3)
- Engineering 432—Theory of Power Transmission Lines (3)
- Engineering 433—Electric Power System Analysis (3)
- Engineering 434—Electric Machines (3)
- Engineering 435—Electronics (3)
- Engineering 436—Semiconductor Electronics (3)
- Engineering 437—Electric and Magnetic Waves (3)
- Engineering 438—Servomechanism Systems (3)
- Engineering 439—Nonlinear Electronics (3)

* Technical electives must be selected from approved major field sequences. Deviations from previously approved fields will require the approval of the Engineering Student Advising Committee.

Civil Engineering Courses

- Engineering 460—Structural Analysis (3)
 Engineering 461—Structural Design (3)
 Engineering 462—Analysis of Indeterminate Structures (3)
 Engineering 463—Reinforced Concrete (3)
 Engineering 465—Specifications and Cost Estimating (3)
 Engineering 466—Soil Mechanics (3)
 Engineering 467—Foundations (3)
 Engineering 480—Plumbing Engineering (3)
 Engineering 481—Water Treatment and Sewage Disposal (3)

Other Courses in Engineering

- Engineering 398—Work Study (3)
 Engineering 490—Engineering Applications of Digital Computers (3)
 Engineering 495—Introduction to Nuclear Engineering (3)
 Engineering 499—Independent Study (1-3) (Requires permission of Head of Engineering Department)

Other Departments

- Economics 300—Economics for Engineers (3)
 Math. and Science: Certain 400 courses with consent of engineering advisers
 Business: Industrial Management courses and other courses with consent of adviser
 Microbiology 360—Sanitary Bacteriology (3)

50 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE † FOR ENGINEERING MAJOR

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Math. 100—Basic Math. Analysis.....	4*	Math. 201—Anal. Geom. & Calc. I.....	4
Chem. 101—Gen. Chemistry.....	5	Physics 201—Gen. Physics I.....	4
Engr. 100—Engr. Drawing.....	2	Engr. 101—Descriptive Geom.....	2
†Engr. 150—Written Expr. <i>or</i>		Biol. Sci. 153—Prin. of Biology.....	3
Lang. Arts 150A.....	3	†Sp. 150—Oral Expr. <i>or</i>	
Phys. Educ. 150.....	1	Lang. Arts 150B.....	3

SOPHOMORE YEAR

Math. 202—Anal. Geom. & Calc. II.....	4	Math. 203—Anal. Geom. & Calc. III.....	4
Physics 202—Gen. Physics II.....	4	Physics 203—Gen. Physics III.....	4
Psych. 150—Human Behavior.....	3	Engr. 201—Statics.....	3
Chem. 102—Gen. Chemistry <i>or</i>		Engr. 206—Orientation.....	1
Engr. <i>or</i> Sci. electives.....	5	Govt. 150—Govt. & Amer. Soc.....	3
		Engr. 207—Materials of Engr.....	2

* See prior note on Math. 100.

† The sequence of taking engineering required courses will depend on the option, and the technical electives which the student intends to take. For example, students who elect electrical engineering as an option should complete Engr. 300 and 307 in the junior year. Likewise, students who elect the mechanical or civil options should take their mechanics or thermodynamics courses prior to Engr. 307.

‡ See "Note" on page 61.

JUNIOR YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Engr. 300—Prin. of Elec. Circuits..	3	Engr. 250—Understanding Lit.....	3
Engr. 301—Dynamics	3	Hist. 250—U.S. History.....	3
Engr. 302—Strength of Materials...	3	Engr. 309—Engr. Analysis.....	3
Engr. 310—Circuits Lab.....	1	Laboratory electives	2
Engr. 312—Strength of Materials		Engr. requirements from the	
Lab.	1	following	6
Math. 302—Adv. Engr. Math.	3	Engr. 303, Engr. 305, Engr. 307	
Engr. 306—Tech. Report Writing..	3		

SENIOR YEAR

Engr. requirements	3	Technical electives	9
Choose from:		Laboratory electives	1
Engr. 307—Prin of Elect. Syst. (3)		Phys. Educ. elective	1
Engr. 303—Fluid Mechanics (3)		Gen. Educ. Soc. Sci. elective.....	3
Technical electives	9	Phil. 150—Phil. Ideas.....	3
I&S 350—Personal Health	2		
Art 150—Art, Music, Dance.....	3		

PREPARATION FOR GRADUATE WORK

Students planning advanced study elsewhere are encouraged to select appropriate courses with guidance of engineering faculty from the following:

Advanced Engineering Mathematics.
Physical Chemistry
Physics

COURSES OF INSTRUCTION *

100 Engineering Drawing (2) Fall, Spring

Preparation of simple working drawing; use and care of drafting instruments; orthographic and isometric projections; auxiliary views. Six hours laboratory.

201 Descriptive Geometry (2) Fall, Spring

Prerequisites: Engineering 100 and Plane Geometry. Basic projection principles of point, line, and plane. Graphical solution of space problems including practical engineering application. Six hours laboratory.

200 Engineering Processes (3)

Study of modern manufacturing processes; machine tools; welding, gas and electric; pattern making; castings; jigs and fixtures; introduction to production analysis and quality control and inspection methods. Two hours lecture; three hours laboratory.

201 Statics (3) Fall, Spring

Prerequisites: Physics 201 and Mathematics 202. Fundamental principles of statics; resolution and composition of forces; algebraic and graphic solutions; friction; center of gravity; moment of inertia. Three hours lecture.

* Some courses which are in a state of transition will be offered according to the 1959-60 Catalog. Department Advisers should be consulted.

202 Plane Surveying (3) Fall

Prerequisite: Trigonometry. Principles and practices of measurement of distances, directions, elevations. Use and care of level, transit, plane table. Mapping practice and symbols. Two hours lecture; three hours laboratory.

204 Machine Drafting (2)

Prerequisite: Engineering 100. Conventions; details; assembly drawings; drawing from sketches; elementary design of machine parts. Six hours laboratory.

205 Construction Drafting (2)

Prerequisite: Engineering 100. Architectural drafting, convention and symbols; detailing of building drawings; layouts of piping for steam, water, air and waste. Six hours laboratory.

206 Orientation Laboratory (1)

Elementary measurements; principles of safety of equipment and personnel; laboratory techniques; laboratory data; laboratory workbook and report; laboratory standards. Three hours laboratory.

207 Materials of Engineering (2) Fall, Spring

Prerequisites: Math. 201, Chemistry 101, and Physics 201. Production composition, and properties of important nonmetals, metals, and alloys. Two hours lecture.

300 Principles of Electric Circuits (3) Fall, Spring

Prerequisite: Physics 203. Corequisite: Mathematics 302. Electric circuit components; the electric circuit defined; Ohm's and Kirchhoff's laws and their applications to circuit analysis; Thevenin's, Norton's, superposition and maximum power transfer theorems and their applications to circuit reduction; circuit representation by impedance, admittance and hybrid parameters; complex algebra, AC circuits and their steady state solutions. Three hours lecture.

301 Dynamics (3) Fall, Spring

Prerequisite: Engineering 201. Fundamental principles of kinetics; rectilinear and curvilinear motion; translation and rotation; work, power, impulse, momentum, and impact. Three hours lecture.

302 Strength of Materials (3) Fall, Spring

Prerequisite: Engineering 201. Stresses and deformations in tension, compression and shear; torsion; riveted joints; simple beams and theory of flexure; deflections of beams; columns. Three hours lecture.

303 Fluid Mechanics (3) Fall, Spring

Prerequisite: Engineering 301. Properties of fluids compressible and incompressible; fluid statics; laminar and turbulent flow; flow in pipes and open channels; fluid measurements; impulse and momentum; pumps and turbines. Three hours lecture.

305 Thermodynamics (3) Fall, Spring

Prerequisites: Mathematics 202, Physics 202. Equation of state; energy equations; thermodynamics properties of substances; cycles; air compression; internal combustion engines. Three hours lecture.

307 Principles of Electric Systems (3) Fall, Spring

Prerequisite: Engineering 300. Corequisites: Engineering 309 and 310. Electron ballistics; gas discharge phenomena; electrons in solids; introduction to solid state physics; idealization of physical systems; linear approximation methods for nonlinear elements and circuits; graphical techniques; DC transient theorems; magnetic circuits; transformers; balanced three-phase circuit analysis. Three hours lecture.

309 Engineering Analysis (3) Fall, Spring

Prerequisites: Mathematics 302, Engineering 300, 301, 305. Clarification, definition and analysis of mechanical, electrical and electro-mechanical systems; use of analogs; classical integro-differential equations method; methods of system analysis which account for variations of system parameters and their effects; elements of the Laplace transform and its use for the solution of system equations. Three hours lecture.

310 Electric Circuits Laboratory (1) Fall, Spring

Prerequisite: Engineering 300. (May be taken concurrently.) Experiments based on Engr. 300. Three hours laboratory.

312 Strength of Materials Laboratory (1) Fall, Spring

Prerequisite: Engineering 302. (May be taken concurrently.) Tests of materials of construction in tension, compression, bending and torsion. Determination of physical properties of wood, steel, concrete and other materials. Hardness tests. Three hours laboratory.

313 Fluid Mechanics Laboratory (1) Fall, Spring

Prerequisite: Engineering 303. Flow through orifices, nozzles, meters, and pipes and over weirs; water hammer; friction; pumps and turbines. Three hours laboratory.

314 Electric Machines Laboratory (1) Fall, Spring

Prerequisites: Engineering 310 and Engineering 434, (Engr. 434 may be taken concurrently.) Experiments based on Engr. 434. Three hours laboratory.

315 Heat Power Laboratory (1) Fall, Spring

Prerequisite: Engineering 406. (May be taken concurrently.) Calibration and use of instruments; heating value of fuels; flue gas analysis; steam generator, engine and turbine tests; internal combustion engine and air compressor tests. Three hours laboratory.

317 Electric Devices Laboratory (1) Fall, Spring

Prerequisites: Engineering 307 and Engr. 310. (May be taken concurrently with Engr. 307.) Experiments based on Engr. 307. Three hours laboratory.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the students' performance; regular group meetings.

TECHNICAL ELECTIVES**Mechanical Engineering****401 Kinematics of Mechanisms (3) Fall, Spring**

Prerequisites: Engineering 301 and 302. Transmission of motion; theory of mechanisms; linkages; gears; cams; belts; chains. Three hours lecture.

403 Principles of Aerodynamics (3) Spring

Prerequisite: Engineering 303. Airfoil characteristics; incompressible flow in subsonic, transonic and supersonic regimes; power considerations; propellers; airplane performance and stability. Three hours lecture.

404 Principles of Turbomachinery (3) Fall

Prerequisites: Engineering 303 and Engineering 406. General treatment of all forms of turbomachines. Dimensional analysis, energy transfer, thermodynamics of compressible flow and the flow of fluids in the passages and over the blades of turbomachines, application to pumps, compressors, hydraulic, gas and steam turbines. Three hours lecture.

405 Principles of Industrial Heat Transfer (3) Fall

Prerequisites: Engineering 305 and Mathematics 302. Study of the basic principles of heat transfer and their application to the design of industrial equipment. Problems in steady state and transient conduction solved by analytical, numerical and analog methods. Free and forced convection. Radiant heat transfer. Three hours lecture.

406 Applied Thermodynamics (3) Fall, Spring

Prerequisite: Engineering 305. Application of thermodynamic principles; steam generators, engines and turbines; combustion; vapor cycles; refrigeration; mixtures of vapors and gases; internal combustion engines.

413 Elements of Machine Design (3) Fall, Spring

Prerequisites: Engineering 302 and 401. (Engr. 401 may be taken concurrently.) Application of principles of mechanics, properties of materials, and fabrication processes to the design of simple machines and structural elements. Three hours lecture.

414 Machine Design (3) Fall, Spring

Prerequisite: Engineering 413. Continuation of Engr. 413 to include design of unit assemblies and machines with regard to suitability of materials, safety, lubrication, construction, etc. Two hours lecture; three hours laboratory.

415 Heating and Ventilating (3) Fall, Spring

Prerequisites: Engineering 305 and 406. Psychometric properties of air; human comfort; heat transfer; heat losses from buildings; heating equipment and systems; steam; hot water; air; ventilation requirements and systems; design of duct systems; residential and industrial applications. Three hours lecture.

416 Air Conditioning and Refrigeration (3) Fall, Spring

Prerequisites: Engineering 303 and 305. Air and humidity calculations; fluid flow and air-distribution systems; principles of refrigeration; refrigeration and air-conditioning equipment; complete study of residential and industrial applications including plumbing aspects. Three hours lecture.

417 Introduction to Chemical Engineering (3) Spring

Prerequisites: Chemistry 102 and Engineering 305. Corequisite: Engineering 406 and a course in organic or physical chemistry, or consent of the instructor. Study of the basic operations in the process industries. Problems in design and operations of processing equipment. Analysis of each operation based on thermodynamics and momentum, heat and mass transfer concepts. Three hours lecture.

420 Power Plants (3) Spring

Prerequisite: Engineering 406. Power plant equipment; steam generators, engines, turbines, condensers, internal combustion engines and other prime movers; load curves; economic selection; cycles and heat balances; design procedure. Three hours lecture.

Electrical Engineering**430 Advanced Circuit Analysis (3) Fall, Spring**

Prerequisite: Engineering 307. Unbalanced three-phase circuit analysis; feedback; low and high Q tuned circuits; coupled circuits; double- and staggered-tuned circuits; the complex frequency plane and impedance representation; filter synthesis and analysis. Three hours lecture.

431 Electric Communications (3) Fall, Spring

Prerequisite: Engineering 430. Corequisite: Engineering 439. Baseband and carrier communication systems; amplitude modulation; frequency modulation; pulse modulation; other modulation systems; signals and their spectra; information capacity, noise and bandwidth of voice, video, data-handling and other communication systems; typical circuitry. Three hours lecture.

432 Theory of Power Transmission Lines (3) Fall

Prerequisites: Engineering 307 and Engineering 430. (May be taken concurrently.) Function and structure of power systems; transmission lines; inductance, capacitance, resistance, current and voltage relations; generalized circuit constants; circle diagrams. Three hours lecture.

433 Electric Power System Analysis (3) Spring

Prerequisites: Engineering 432 and 434. Representation of power systems; symmetrical components; short circuits on machines and systems; system protection; elements of system stability. Three hours lecture.

434 Electric Machines (3) Fall, Spring

Prerequisite: Engineering 307. Principles, construction, characteristics, and applications of direct-current generators and motors, and alternating-current induction and synchronous machines. Three hours lecture.

435 Electronics (3) Fall, Spring

Prerequisites: Engineering 307 and consent of instructor. Corequisites: Engineering 317 and 430. Diode—ideal, actual, use as a rectifier and detector, gas, selenium, silicon; power supplies—efficiency, ripple, regulation, voltage doublers, choke and capacity input filters; multiphase power supplies; controlled rectification elements—thyatron, ignitron, three layer diode; multielement vacuum tubes and transistors—the meanings of their characteristics, parameters and equivalent circuits as derived from the material presented in Engineering 300; linear class A operation; linear single ended class B operation; push-pull operation; input and output impedance. Three hours lecture.

436 Semi-Conductor Electronics (3) Fall, Spring

Prerequisite: Engineering 307. Engineering 435 should be taken concurrently. Physics of semiconductors; methods of manufacture and analysis of the product; survey of semiconductor applications; junction diode; transistor as a circuit element; transistor applications; transistor circuit stability problems and solutions. Practical applications. Three hours lecture.

437 Electric and Magnetic Waves (3) Fall, Spring

Prerequisites: Engineering 309 and 430. Electric and magnetic fields; plane electromagnetic waves; reflected waves; guided waves; transmission lines and wave guides; antennas. Three hours lecture.

438 Servomechanism Systems (3) Fall, Spring

Prerequisite: Engineering 430. Definitions of open and closed loop systems; principles of closed loop systems; applications; static analysis; dynamic analysis; unique problems; unique solutions; modern analysis methods. Three hours lecture.

439 Nonlinear Electronics (3) Fall, Spring

Prerequisites: Engineering 435 and consent of instructor. Tuned power amplifiers; power oscillators; pulse, digital and other nonlinear electronic circuits and applications. Three hours lecture.

440 Electronics Laboratory (1) Fall, Spring

Prerequisite: Engineering 435. (May be taken concurrently.) Experiments based on Engineering 435. Three hours laboratory.

41 Electromagnetics Laboratory (1)

Prerequisite: Engineering 317. Corequisite: Engineering 437 and/or 431. Experiments in communication and microwave systems, largely based on Engineering 431 and 437. Three hours laboratory.

Civil Engineering**460 Structural Analysis (3) Fall, Spring**

Prerequisite: Engineering 302. Analysis of simple structures; beams, tension and compression members; analysis of bridge and roof trusses and of building frames. Three hours lecture.

461 Structural Design (3) Fall, Spring

Prerequisite: Engineering 460. Design of structural members including tension and compression members, beams, and built-up girders, together with connections. Framing and design of simple bridges, buildings, and frameworks in metal. Codes and specifications of various organizations used as reference. Two hours lecture; three hours laboratory.

462 Analysis of Indeterminate Structures (3) Fall, Spring

Prerequisite: Engineering 460. Analysis of statically indeterminate structures by classical and modern methods; continuous beams, rigid frames, trusses, arches; applications of superposition and influence lines; methods of minimal principles, slope deflection, moment distribution. Three hours lecture.

463 Reinforced Concrete (3) Fall, Spring

Prerequisite: Engineering 460. Theory and design of plain and reinforced concrete structures; design of mixes; beams; tee-beams; floors; columns; footing. Three hours lecture.

465 Specifications and Cost Estimating (3) Fall

Building specification and codes: estimating costs; material handling and transportation; excavation; concrete, wood, masonry, and steel construction. Three hours lecture.

466 Soil Mechanics (3) Fall

Prerequisites: Engineering 302 and Engineering 303. (303 may be taken concurrently) Physical and mechanical properties of soils, classification, permeability, seepage, capillarity, consolidation, settlement, stresses, pressures, strength theories, testing methods. Three hours lecture.

467 Foundations (3) Spring

Prerequisites: Engineering 466. Types, spread footings, piles, caissons, retaining walls, cofferdams, dams, factor of safety. Three hours lecture.

Plumbing Engineering

480 Plumbing Engineering (3) Fall

Prerequisite: Engineering 303 or consent of instructor. Hydraulics and pneumatics; water supply and consumption; pumps and storage tanks; design and layout of piping; fire protection and sprinkler systems; drain and vent pipes; sewage and drain pumps; valves, meters, and fixtures; plumbing codes. Three hours lecture.

481 Water Treatment and Sewage Disposal (3) Spring

Water supply and purification; operation and control of water treatment plants; sewage treatment and disposal; sewer systems. Three hours lecture.

SPECIAL COURSES

490 Engineering Applications of Digital Computers (3) Fall, Spring

Prerequisite: Senior standing in engineering. Introduction to the theory, construction, and use of high-speed digital computers in the solution of engineering problems. Two hours lecture; three hours lab.

495 Introduction to Nuclear Engineering (3) Spring

Prerequisite: Senior standing in engineering plus a course in nuclear physics or Physics 301. Introduction to basic engineering principles involved in the design of nuclear reactors; review of nuclear physics required for engineering applications; diffusion of neutrons; reactor mechanics, radiation shielding; materials of construction; reactor instrumentation and control. Three hours lecture.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

ENGLISH

(In the Division of Language Arts)

STAFF: Guyer (Department Head), Amneus, Beckwith, Bird, Brand, Bushman, Collins, Coulette, Cronin, Fick, Friedman, Fruman, Gordon, Hodgman, Laird, Landar, Laser, Leary, McKenzie, Maloney, Marcus, Motherwell, Rathbun, Robinson, Sandelin, Shroyer, Smeaton, Swerdlow, Williams, Zall.

Visiting Professors of English:

Christopher Isherwood (1959-60); Wright Morris (1960-61).

BACHELOR'S DEGREE CURRICULA

Major in English

See also page 60 for B.A. degree requirements.

Designed for students who: (1) elect to study the liberal arts with emphasis in literature and language; or (2) plan to pursue careers in writing. The student undertaking the English major must request assignment of an adviser at the Division of Language Arts office when he begins courses in this major. English majors are strongly urged to acquire command of at least one foreign language.

Lower Division

English 260—Analysis and Appreciation of Literature.....	3 units
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Upper Division

English 405—Modern English Grammar.....	3 units
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English 406—Communication of Ideas.....	3 units
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English 440—Critical Approaches to Literature.....	3 units
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At least <i>two</i> courses from the following.....	6 units
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English 417—Interpreting Shakespeare (3)

English 426—Modern British Drama (3)

English 460—The Age of Chaucer (3)

English 461—Dramatic Literature of the English Renaissance (3)

English 463—The English Renaissance (3)

English 465—The Age of Reason (3)

English 466—The British Novel (3)

English 467—The Romantic Age (3)

English 468—The Victorian Age (3)

English 469—Twentieth Century British Literature (3)

At least <i>two</i> courses from the following.....	6 units
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English 427—Modern American Drama (3)

English 470—Masters of American Literature, 1620-1860 (3)

English 471—Masters of American Literature, 1860-1960 (3)

English 472—Twentieth Century American Literature (3)

English 473—The American Renaissance (3)

English 474—Major American Novelists: Cooper to James (3)

English 475—Major American Novelists: Crane to Faulkner (3)

At least *one* course from the following 3 units

- English 424—Greek and Roman Drama (3)
 English 425—Modern Continental Drama (3)
 English 480—Literature and the Fine Arts, B.C. (3)
 English 481—Literature and the Fine Arts, A.D. (3)
 English 482—Bible as Literature (3)
 English 484—Contemporary World Literature (3)
 English 485—Literature and Human Values (3)
 English 486—Major Continental Novelists (3)

At least *three* courses from those in the 400's in English 9 units

American Studies 402 and Language Arts 410 may also be included.

The English major must have the approval of his departmental adviser for courses chosen under this requirement.

36 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR ENGLISH MAJORS

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
*Engl. 150—Writ. Expr. or Lang. Arts 150A—Oral & Written Communication	3	*Sp. 150—Oral Expr. or Lang. Arts 150B—Oral & Written Commun.	3
Govt. 150—Govt. & Amer. Soc.	3	Anthro. 150—Cultural Anthro.	3
Hist. 250—U. S. History	3	Biol. Sci. 153—Prin. of Biology ..	3
Psych. 150—Human Behavior	3	Art 150—Art, Music, Dance	3
Phil. 250—Logic	3	Elective	3

SOPHOMORE YEAR

Phys. Sci. 151—Prin. of Phys. Sci. I	3	Engl. 260—Analysis and Appreciation of Lit.	3
Phil. 150—Phil. Ideas	3	Biol. Sci. 154—Prin. of Biology or	
Phys. Educ. 150	1	Phys. Sci. 152—Prin. of Phys. Sci. II	3
Electives	6	Gen. Educ. elective	3
		Phys. Educ. elective	1
		Electives	6

JUNIOR YEAR

Engl. 405—Modern English Gram.	3	One of the following	3
Eng. 406—Commun. of Ideas	3	Engl. 427, 470, 471, 472, 473, 474, 475	
One of the following	3	One of the following	3
Engl. 424, 425, 480, 481, 482, 484, 485, 486		Engl. 417, 426, 460, 461, 463, 465, 466, 467, 468, 469	
One of the following	3	H & S 350—Personal Health	2
Engl. 427, 470, 471, 472, 473, 474, 475		Electives	8
Electives	4		

SENIOR YEAR

One of the following	3	Engl. 440—Critical Appr. to Lit.	3
Engl. 417, 426, 460, 461, 463, 465, 466, 467, 468, 469		Elective in English	3
Electives	6	Electives	9
Electives in English	6		

* Engl. 150 and Sp. 150 in either order make a sequence; Lang. Arts 150 A and B make a separate sequence. Lang. Arts 150 A or B may *not* be combined with Engl. 150 or Sp. 150.

General Secondary Teaching Major

Designed for candidates for the general secondary credential in English. The student must request assignment of an adviser at the Division of Language Arts office when he begins courses in the teaching major. The student must meet the following requirements:

1. Professional education requirements. See page 151.
2. Completion of the major in English including English 406.
3. In addition to the major the student must take Speech 464 or Journalism 464.
4. Graduate (fifth year). At least two English courses approved by the departmental adviser. American Studies 402 and Language Arts 410 may be taken under this requirement.

SUGGESTED COURSE SEQUENCE FOR ENGLISH MAJOR WITH GENERAL SECONDARY CREDENTIAL

FRESHMAN YEAR AND SOPHOMORE YEAR SAME
AS FOR ENGLISH MAJOR

JUNIOR YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Engl. 405—Modern Engl. Gram.	3	Electives in English	6
Engl. 406—Commun. of Ideas	3	One of the following	3
One of the following	3	Engl. 427, 470, 471, 472, 473, 474,	
Engl. 427, 470, 471, 472, 473, 474,		475	
475		One of the following	3
One of the following	3	Engl. 417, 426, 460, 461, 463, 465,	
Engl. 424, 425, 480, 481, 482, 484,		466, 467, 468, 469	
485, 486		Minor	2
Minor	4	H&S 350—Personal Health	2
Educ. 300—Intro. Cred. Prog.	N.Cr.		

SENIOR YEAR

One of the following	3	Engl. 440—Critical Appr. to Lit.	3
Engl. 417, 426, 460, 461, 463, 465,		Electives in English	3
466, 467, 468, 469		Educ. 471—Sec. Educ.	5
Minor	6	Educ. 480—Fund. Counsel. &	
Educ. 413—Psych. and Soc.	5	Guid.	2
Sp. 464—High school Dramatics		Educ. 490—Audio-Visual	2
or			
Jour. 464—High Sch. Journalism ..	2		

FIFTH YEAR

Electives in English	6	Educ. 444YZ—Directed Teaching ..	3
Educ. 493—Methods		Educ. 442—Prob. in Sec. Tchng.	6
Major (2)		Minor	3
Minor (2)	4	Elective	3
Minor	6		

General Secondary Teaching Minor

For teaching credential requirements see also pages 151-152. Candidates for the teaching minor in English are required to have courses in each of these areas: composition, literature, speech, and journalism or drama. The student undertaking an English minor must request assignment of an adviser at the Division of Language Arts office when he begins courses in the minor.

Lower Division

English 260—Analysis and Appreciation of Literature 3 units

Upper Division

English 405—Modern English Grammar 3 units

English 406—Communication of Ideas 3 units

At least *one* of the following 3 units

English 417—Interpreting Shakespeare (3)

English 426—Modern British Drama (3)

English 460—The Age of Chaucer (3)

English 461—Dramatic Literature of the English Renaissance (3)

English 463—The English Renaissance (3)

English 465—The Age of Reason (3)

English 466—The British Novel (3)

English 467—The Romantic Age (3)

English 468—The Victorian Age (3)

English 469—Twentieth Century British Literature (3)

At least *one* course from the following 3 units

English 427—Modern American Drama (3)

English 470—Masters of American Literature, 1620-1860 (3)

English 471—Masters of American Literature, 1860-1960 (3)

English 472—Twentieth Century American Literature (3)

English 473—The American Renaissance (3)

English 474—Major American Novelists: Cooper to James (3)

English 475—Major American Novelists: Crane to Faulkner (3)

At least *one* course from the following 3 units

English 424—Greek and Roman Drama (3)

English 425—Modern Continental Drama (3)

English 480—Literature and the Fine Arts, B.C. (3)

English 481—Literature and the Fine Arts, A.D. (3)

English 482—Bible as Literature (3)

English 484—Contemporary World Literature (3)

English 485—Literature and Human Values (3)

English 486—Major Continental Novelists (3)

At least *one* course from those in the 400's in literature
offered by the Department of English 3 units

21 units

MASTER OF ARTS DEGREE

Graduate students considering this degree must request a departmental adviser by appearing at the Division of Language Arts office at the earliest possible opportunity.

1. Prerequisites: At least 24 units of approved courses in English, or performance on the Graduate Record Examination in English with a score which indicates the equivalent thereof. All graduate students who plan to study for the Master of Arts in English must take the Graduate Record Examination—Advanced Test in Literature in addition to the aptitude test of the Graduate Record Examination. English 405—Modern English Grammar, and English 440—Critical Approaches to Literature are specific prerequisites to English 505—Seminar in Language, and English 540—Seminar in Literary Criticism, respectively. These prerequisite courses will be counted in the Master of Arts program only when the candidate has preliminary preparation in other subjects in English which leaves room for English 405 and English 440 without

causing other serious inadequacies. The candidate must also furnish evidence of ability to write in a style appropriate to the advanced student of language and literature.

In addition to specific course prerequisites, the prospective candidate must meet the all-college requirements for advancement to candidacy which are listed in the *Graduate Bulletin* obtainable from the Office of the Dean of Graduate Study.

2. At least *five* courses in the 500 series in English, as follows:

English 505—Seminar in Language	3 units
English 520—Seminar in Literature	3 units
English 540—Seminar in Literary Criticism	3 units
English 560—Seminar: Special Studies in Literature	3 units
English 562—Seminar: Significant Intellectual Movements: Their Effect on Literature	3 units

3. At least six approved units outside the Department of English in a clearly related field 6 units

4. At least nine units of electives 9 units

These are to be selected from those 400 series courses in the Department of English which constitute the most pertinent advanced study for the candidate. English 598—Graduate Independent Study may be advised on the basis of the candidate's performance on the Graduate Record Examination in literature. English 599—Graduate Project may be advised if, in the estimation of his adviser, the candidate merits the opportunity.

5. Comprehensive Examination

This examination is ordinarily in essay form and requires the student to apply a comprehensive knowledge of language, literature, and criticism to complex problems in his field.

COURSES OF INSTRUCTION

Introductory Courses

150 Written Expression (3) (General Education) Fall, Spring

Language as a tool of thought and communication; the relations between thinking, writing, reading, and speaking; practice in reading and collecting information, and in organizing and presenting ideas in writing.

250 Understanding Literature (3) (General Education) (3) Fall, Spring

First course in literature, designed to give the student experience of the general range, power, and human relevance of literary works, and knowledge of their special forms and techniques.

260 Analysis and Appreciation of Literature (3) Fall, Spring

Study of fiction, drama, and poetry with emphasis on their special technical resources and achievements.

Language and Composition Courses

Upper division standing and a freshman composition course (or concurrent enrollment in English 150 or Language Arts 150A or B) are prerequisite for all language and composition courses in the 400 series.

306 Technical Report Writing (3) Fall, Spring

Problems in scientific writing. Preparation of technical reports.

392W-X-Y-Z Statement (1-1-1-1) Fall, Spring

Prerequisite: Consent of faculty adviser of *Statement*. Sophomores eligible. Membership on the editorial staff of the literary magazine of the college. Regular attendance at weekly staff meetings. May be repeated for additional credit to a total of six units and may be taken in addition to the normal study load.

400 History of the English Language (3) Fall

The changes in vocabulary, grammar, and phonology which English has undergone, and the manner in which these changes reflect English and American culture.

401 American English Dialects (3) Fall, Spring

Regional and social differences in pronunciation, grammar, and vocabulary of American English; historical causes of dialect features and methods of linguistic geography.

405 Modern English Grammar (3) Fall, Spring

Structural approach to the grammar of English; comparison with traditional grammar.

406 Communication of Ideas (3) Fall, Spring

Logical and semantic analysis of problems in the communication of ideas. Emphasis on advanced practice in reading, writing, and group discussion.

408W-X-Y-Z Creative Writing (3-3-3-3) Fall, Spring

Prerequisite: Consent of instructor. Designed to develop knowledge and skill in Creative Writing. Separate sections for poetry and fiction.

409 English Structure and Usage (3) Fall, Spring

Prerequisite: English 405. Advanced study of English structure and usage.

410 High School Composition (3) Fall, Spring

Principles and evaluation of high school student writing.

411 Advanced Composition (3) Fall, Spring

Prerequisite: Demonstration of competence in writing. Advanced principles and applications of expository writing.

Interpretation Courses

Upper division standing and a freshman composition course (or concurrent enrollment in English 150 or Language Arts 150A or B) are prerequisites for all interpretation courses.

421 Interpreting Fiction (3) Fall, Spring

Prerequisite: English 250 or equivalent. Critical analysis of short stories and novels.

- 423 The Language and Nature of Poetry** (3) Fall, Spring
Prerequisite: English 250 or equivalent. Analysis of representative poems, diction, metaphor and image, sound structure, and rhythm as elements of poetic statement.
- 430 Interpreting Children's Literature** (3) Fall, Spring
Principles for evaluating children's literature. The role of literature in the child's education.
- 432 Popular Literature** (3) Fall, Spring
Analysis of literature used in high schools and of contemporary literature of wide appeal: best sellers, paperbacks and book club selections. Study of ways to improve understanding and appreciation of literature.
- 440 Critical Approaches to Literature** (3) Fall, Spring
Prerequisites: English 260, or equivalent, and senior standing or consent of instructor. Study of major systems of critical thought in relation to works of imaginative literature.

English Literature Courses

Upper division standing and a freshman composition course (or concurrent enrollment in English 150 or Language Arts 150A or B), and English 260 or consent of instructor are prerequisites for all English literature courses in the 400 series.

- 417 Interpreting Shakespeare** (3) Fall, Spring
Analysis of 12 to 15 plays as drama and poetry.
- 426 Modern British Drama** (3) Fall
Major plays from Shaw to the present.
- 460 The Age of Chaucer** (3) Fall
(Offered 1960 and alternate years thereafter)
Selected works in Middle English with special emphasis on Chaucer.
- 461 Dramatic Literature of the English Renaissance** (3) Spring
(Offered 1962 and alternate years thereafter)
Prerequisite: English 417. Tudor and Jacobean drama, exclusive of Shakespeare.
- 463 The English Renaissance** (3) Fall
Nondramatic literature from 1550 to 1660 and the cultural forces which helped to shape it.
- 465 The Age of Reason** (3) Fall
Representative works from the Restoration through the eighteenth century.
- 466 The British Novel** (3) Spring
(Offered 1960 and alternate years thereafter)
Selected novels from the eighteenth century to the present.

467 The Romantic Age (3) Spring

Aesthetic, political, and philosophical ideas in prose and poetry of major Romantic writers.

468 The Victorian Age (3) Spring

Philosophical, aesthetic, political, and scientific thought in prose and poetry of major Victorian writers.

469 Twentieth Century British Literature (3) Spring

Nondramatic literature since 1900 and the cultural forces which helped to shape it.

American Literature Courses

Upper division standing and a freshman composition course (or concurrent enrollment in English 150 or Language Arts 150A or B), and English 260 or consent of instructor are prerequisites for all American literature courses in the 400 series.

427 Modern American Drama (3) Spring

(Offered 1960 and alternate years thereafter)

Major plays from Eugene O'Neill to the present.

470 Masters of American Literature, 1620-1860 (3) Fall, Spring

Significant literary works and movements from the colonial era to the Civil War.

471 Masters of American Literature, 1860-1960 (3) Fall, Spring

Significant literary works and movements from the Civil War to the present.

472 Twentieth Century American Literature (3) Fall

Major writers and literary movements.

473 The American Renaissance (3) Spring

Prerequisite: English 470 or consent of instructor. America's intellectual independence as expressed in the writings of Emerson, Whitman, Thoreau, and Emily Dickinson.

474 Major American Novelists: Cooper to James (3) Fall**475 Major American Novelists: Crane to Faulkner (3) Spring****World Literature Courses**

Upper division standing and satisfactory completion of a freshman composition course (or concurrent enrollment in English 150 or Language Arts 150A or B) and English 260 or consent of instructor are prerequisites for all world literature courses in the 400 series.

424 Greek and Roman Drama in Translation (3) Fall

(Offered 1960 and alternate years thereafter)

Significant plays from Aeschylus to Seneca.

- 425 Modern Continental Drama in Translation** (3) Spring
(Offered 1961 and alternate years thereafter)
Significant plays from Ibsen to the present.
- 480 Literature and the Fine Arts, B. C.** (3) Fall
Masterpieces of oriental, Greek and Roman literature, and their relation to major movements in thought and art.
- 481 Literature and the Fine Arts, A. D.** (3) Spring
Masterpieces of western literature and their relation to major movements in thought and art. May be taken separately or in any sequence with English 480.
- 482 Bible as Literature** (3) Fall, Spring
Prerequisite: English 250 or equivalent. Extensive rather than intensive readings in the Old and New Testaments. Structure and characteristics of biblical narrative, poetry, biography, prophecy, epistles and apocalyptic. Some consideration of cultural and historical backgrounds.
- 484 Contemporary World Literature** (3) Fall
Masterpieces of western literature of the late nineteenth and twentieth centuries. Includes American, English, and European writers.
- 485 Literature and Human Values** (3) Spring
Ways in which literature of other nations treats problems confronting the present generation.
- 486 Major Continental Novelists** (3) Fall
(Offered 1961 and alternate years thereafter)

Special Studies

- 398 Work-Study Assignments and Reports** (1-2) Fall, Spring
Prerequisite: Active, approved employment under the work-study program. On-the-job performance carefully supervised; regular student reports and regular group meetings required.
- 490 Studies in Selected British Writers** (3) Fall, Spring
Prerequisites: Senior standing and one upper division course in English literature. Intensive study of major figures in English literature.
- 491 Studies in Selected American Writers** (3) Fall, Spring
Prerequisites: Senior standing and one upper division course in American literature. Intensive study of major figures in American literature.
- 499 Independent Study** (1-3) Fall, Spring
Prerequisite: Consent of the department. Project selected in conference with sponsor during registration; regular meetings and written reports.

Graduate Courses

Graduate standing is prerequisite to registration in the following courses.

505 Seminar in Language (3) Fall, Spring

Prerequisite: English 405 or equivalent. Review of elements of English structure; advanced study of phonological basis of language. Problems and relevant historical background of modern English usage.

520 Seminar in Literature (3) Fall, Spring

Prerequisite: At least one upper division course in English literature, American literature, and world literature; or consent of the instructor. Advanced study of selected literary problems. Specific subject announced in class schedule.

540 Seminar in Literary Criticism (3) Fall, Spring

Prerequisite: English 440 or consent of instructor. Intensive study of techniques and problems of criticism, with attention to philosophical bases of major critical positions. Practice in explication, critical examination of literary texts, and the writing of criticism.

560 Seminar: Special Studies in Literature (3) Fall, Spring

Prerequisite: Same as for English 520. Advanced study of major literary movement or type. Specific subject announced in class schedule.

562 Seminar: Significant Intellectual Movements: Their Effect on Literature (3) Fall, Spring

Prerequisite: Same as for English 520. Advanced study of writers and their work in their intellectual milieu; specific subject announced in class schedule.

598 Graduate Independent Study (3) Fall, Spring

Prerequisite: Consent of department. Directed reading, regular written reports and conferences. Study plan must be approved during registration.

599 Graduate Project (3) Fall, Spring

Prerequisite: Consent of department. Investigation of a sizeable problem in language or literature, and completion of a formal report. Study plan must be approved by instructor during registration.

FRENCH

(In the Division of Language Arts)

STAFF: Bonhard, Lionetti, Schwartz.

BACHELOR'S DEGREE CURRICULUM

*A major in French is being planned. For information consult the
Foreign Language Department Head.*

General Secondary Teaching Minor

See also pages 151-152 for professional education requirements. A teaching major in a second teaching subject is also required for the general secondary credential.

Students entering Los Angeles State College from high school with two years of French are permitted to register in French 100B, those entering with three years, in French 200A; those with four years, in French 200B. Full year courses in French completed in high school may not be repeated for graduation credit.

* Lower Division

French 200A-B—Intermediate French	8 units
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Upper Division

French 300—Conversation and Composition.....	3 units
French 301—Advanced Oral and Written Composition.....	3 units
French 402—French Literature from the Beginnings through the Seventeenth Century	3 units
French 403—French Literature from the Eighteenth Century to the present	3 units
	20 units

Courses of Instruction

All upper division courses are conducted in French.

100A Elementary French I (4)

Methodical presentation of the structure of the language through hearing, speaking, reading, and writing French.

100B Elementary French II (4)

Prerequisite: French 100A, or equivalent. Oral and written treatment of graded reading material with purpose of reviewing structure, and increasing proficiency in understanding, speaking, reading, and writing French.

150 Basic Patterns in French (3) (General Education)

No prerequisite. Beginning course with emphasis on understanding and speaking the French used in everyday situations. Introduction to

* Lower division courses may also be used to fulfill requirements or recommendations of other departments in the college.

aspects of the history, culture, and psychology of the French people. This is a one semester terminal course for students who have no knowledge of French. This course cannot be substituted for French 100A.

200A Intermediate French I (4)

Prerequisite: French 100B or equivalent. Aims to improve speaking and understanding of French as well as to teach reading for comprehension, and simple writing.

200B Intermediate French II (4)

Prerequisite: French 200A or equivalent. Affords the student greater security in French through intensive sessions in speaking, understanding, writing and reading the language.

300 Conversation and Composition (3) Offered alternate years

Prerequisite: French 200AB or equivalent. Emphasis on the use of idioms—spoken and written; vocabulary expansion; readings in contemporary French prose.

301 Advanced Oral and Written Composition (3) Offered alternate years

Prerequisite: French 200AB or equivalent. Functional review of grammar as used for communication skills; the writing of current idiomatic French; drill in more difficult patterns of speech; explication de texte.

402 French Literature From the Beginnings Through the Seventeenth Century (3) Offered alternate years

Prerequisite: French 200AB or equivalent. Study of the great French epics; lyric poetry of the Middle Ages; representative chronicles; development and growth of the French language; the fable; the essay; dramas of the Classical Age.

403 French Literature From the Eighteenth Century to the Present (3) Offered alternate years

Prerequisite: French 200AB or equivalent. French thought of the Philosophic Age; the Romantic Movement in France; the novel, drama and poetry between 1850 and 1914; the contemporary masterpieces.

499 Independent Study (1-3) Fall, Spring

Prerequisite: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GEOGRAPHY

(In the Division of Social Sciences)

STAFF: Byron (Department Head), Best, Coffin, Eidt, Newcomb, Nishi, Padick, Price.

BACHELOR'S DEGREE CURRICULUM

Geography seeks to describe and interpret the natural and human characteristics of the face of the earth through the study of their origins and distribution patterns.

The major in geography is designed to fulfill the purposes both of a liberal arts education and of professional preparation in geography and closely allied fields.

Major in Geography

Lower Division

Geography 150—Human Geography	3 units
Geography 160—Physical Geography	3 units
Geography 260—Elements of Meteorology	3 units
Geography 265—Air Photo and Map Interpretation	3 units
Basic Courses in Anthropology, Economics, <i>or</i> Sociology	3 units
Basic courses in Botany, Geology, <i>or</i> Physics	3-5 units

18-20 units

Upper Division

Group 1 (required)	
Geography 405—Cartography	3 units
Geography 460—Field Geography	3 units
Group 2: Physical Geography: select from the following	3 units
Geography 402—Geomorphology (3)	
Geography 410—Climatology (3)	
Group 3: Systematic Human Geography: select from the following	3 units
Geography 441—World Resources (3)	
Geography 475—Geography of Settlement (3)	
Geography 481—Political Geography (3)	
Group 4: Regional Geography: select from the following	9 units
Geography 421—Geography of United States and Canada (3)	
Geography 423—Geography of Europe (3)	
Geography 424—Geography of Asia (3)	
Geography 425—Geography of Japan (3)	
Geography 426—Geography of the Soviet Union (3)	
Geography 427—Geography of Middle America (3)	
Geography 428—Geography of South America (3)	
Geography 429—Geography of the Pacific Area (3)	
Geography 431—Geography of California (3)	
Group 5: Related courses in the natural and social sciences as approved by adviser. (3-5 units of a foreign language are recommended)	9 units
Additional course from group 2, 3, or 4	3 units

33 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR GEOGRAPHY MAJOR

FRESHMAN YEAR			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
**Engl. 150—Written Expr. <i>or</i>		**Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3
Geog. 150, Govt. 150 <i>or</i>		Geog. 150, Psych. 150 <i>or</i>	
Psych. 150	6	Govt. 150	3
Biol. Sci. 153—Prin. of Biology <i>or</i>		Biol. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151	3	Phys. Sci. 151	3
Elective †	3-4	Geog. 160—Phys. Geog.	3
		Elective †	3-4

SOPHOMORE YEAR

Geog. 260—Elem. of Meteor.	3	Geog. 265—Air Photo & Map	3
Hist. 250—U. S. History	3	Phil. 150—Phil. Ideas	3
Biol. Sci. 154—Prin. of Biology <i>or</i>		Basic nongeneral educ. course in	
Phys. Sci. 152	3	botany, geology, or physics	3-5
Soc. 150 <i>or</i> 201; Anthro. 150;		Phys. Educ. elective	1
Econ. 150 <i>or</i> 201	3	Elective †	3-4
P.E. 150	1	(Personal Health is recommended if	
Elective †	3-4	the student elects not to take a for-	
		eign language.)	

JUNIOR YEAR

Geog. 402—Geomorphology <i>or</i>		Geog. 402, 410, 441, 475, 481, <i>or</i>	
Geog. 410—Climatology	3	any regional course	3
Geog. 441, 475, <i>or</i> 481	3	Geog. 405—Cartography	3
Engl. 250—Understanding Lit.	3	Outside elective chosen from up-	
Outside electives chosen from up-		per division courses in related	
per division courses in related		natural and social sciences	3-5
natural and social sciences	3-5	Art 150—Art, Music, Dance	3
Elective	3	Elective	3
		Geog. 460—Field Geog.*	3

SENIOR YEAR

Regional Geography	3	Regional Geography	6
Outside elective chosen from up-		H&S 350—Personal Health	2
per division courses in related		Electives	6
natural and social sciences	3-5		
Gen. Educ. elective	3		
Electives	6		

MASTER OF ARTS DEGREE

The graduate program is built on the foundation of undergraduate preparation. The master's degree requires intensive directed study in geography aimed at depth of understanding and intellectual attainment.

The master of arts degree in geography is designed to prepare students for teaching at the secondary and junior college levels, for govern-

* Geography 460—Field Geography (3) is required of all majors. This course will be offered only in the summer. It is recommended that geography majors take this course between their junior and senior years.

** See "Note" on page 61.

† Two years of a foreign language are recommended for the geography major.

‡ If the student elects to take Economics 201 or Sociology 201 in place of the General Education courses in those fields he must select a three-unit course from the General Education list of electives. Otherwise the elective is free.

ment work of various types, and for advanced training in the field of geography.

Prerequisite: Completion of the basic requirements for the undergraduate major in geography and passing grade on a preliminary oral examination. A master's program for each student must be worked out in advance with an adviser and approved by the department.

1. Core requirements:

- | | |
|--|---------|
| a. Geography 570—Studies in the Nature of Geography..... | 3 units |
| b. Select from the following..... | 9 units |
| Geography 571—Studies in Regional Geography (3) | |
| Geography 575—Studies in Human Geography (3) | |
| Geography 580—Studies in Physical Geography (3) | |
| Geography 599—Thesis (3) | |

(The above seminars may be repeated for different areas or topics.)

- | | |
|--|------------|
| 2. Electives in geography (400 and 500 level courses)..... | 9–12 units |
| 3. Electives in related fields outside of geography..... | 6– 9 units |

30 units

4. Demonstration of reading competency in geographical literature in a foreign language.

5. Written comprehensive examinations if the student does not write a thesis. The student will be given three examinations, each of approximately three hours in length, on the following topics:

- General geography.
- A systematic branch of geography (physical, economic, political, etc.)
- A specific region, continental in scope.

COURSES OF INSTRUCTION

150 Human Geography (3) (General Education) Fall, Spring

(Not open to students who have had a college course in cultural or human geography.) Areal studies of the origins, dispersals, and contemporary distributions of the peoples of the world and their settlement characteristics.

160 Physical Geography (3) Fall, Spring

Study of the natural environment of man; the nature, distribution and relationships of climate, landforms, vegetation, hydrography, and soils.

240 Economic Geography (3) Fall

Areal differentiation of world production, consumption, and trade.

260 Elements of Meteorology (3) Fall

Introduction to dynamic and synoptic relationships of weather elements.

265 Air Photograph and Map Interpretation (3) Fall

Prerequisite: One of the following—Geography 150, 160, 240. Interpretation of natural and cultural landscapes as revealed by maps and aerial photographs.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

400 World Regional Geography (3) Fall, Spring

Study of major physical regions of the world and their occupation and development by man. Designed for the upper division transfer student. No credit will be allowed if the student has taken a lower division course in geography.

402 Geomorphology (3) Fall

Prerequisite: Geography 160 or 400, or Geology 101. Identification and interpretation of landforms. Local field trip.

405 Cartography (3) Spring

Prerequisite: One of the following—Geography 150, 160, 240, 265, 400. Maps and techniques of map drafting. Lecture one hour; laboratory four hours.

410 Climatology (3) Fall, Spring

Prerequisite: Geography 260. Major climatic types of the earth; distribution, processes, and problems of classification.

**421 Geography of the United States and Canada (3)
Fall, Spring**

Prerequisite: One of the following—Geography 150, 160, 240, 400. Nature and development of the major regions of the United States and Canada.

423 Geography of Europe (3) Fall, Spring

Prerequisite: One of the following—Geography 150, 160, 240, 400. Interpretation of the natural and cultural features of the countries of Europe and the Mediterranean.

424 Geography of Asia (3) Fall, Spring

Prerequisite: One of the following—Geography 150, 160, 240, 400. Survey of physical economic, cultural, and political geography of China, Japan, Korea, India, Pakistan, and Southeastern Asia.

425 Geography of Japan (3) Spring

Prerequisite: One of the following—Geography 150, 160, 240, 400. Study of Japanese geography with special attention to analysis of population and economic problems, interpretation of complex socio-cultural forms, and investigation of physical components of the land.

426 Geography of the Soviet Union (3) Fall, Spring

Prerequisite: One of the following—Geography 150, 160, 240, 400. Interpretation of natural and cultural features of the Soviet Union.

27 Geography of Middle America (3) Fall

Prerequisite: One of the following—Geography 150, 160, 240, 400. Physical environment and major settlement features in Mexico, Central America, and the islands of the Caribbean.

28 Geography of South America (3) Spring

Prerequisite: One of the following—Geography 150, 160, 240, 400. Physical and cultural environments in the countries of South America.

29 Geography of the Pacific Area (3) Fall

Prerequisite: One of the following—Geography 150, 160, 240, 400. Human and physical features of the islands of the Pacific, Australia, and the Pacific rim. Emphasis on geographic factors influencing contemporary events.

31 Geography of California (3) Fall, Spring

Prerequisite: One of the following—Geography 150, 160, 240, 400. Regional study of California. Emphasis on settlement and utilization of resources.

41 World Resources (3) Spring

Prerequisite: One of the following—Geography 150, 160, 240, 400. Distribution and utilization of major agricultural and mineral resources of the world.

60 Field Geography (3) Summer

Prerequisite: One of the following sequences—Geography 150, 160, and 265; Geography 160, 240, and 265; Geography 265 and 400. Field identification and interpretation of natural and man-made features and the methods used therein.

75 Geography of Settlement (3) Spring

Prerequisite: One of the following—Geography 150, 160, 240, 400. Man's manner of settling new lands and resettling old lands. The form and function of resulting settlements.

81 Political Geography (3) Fall

Prerequisite: One of the following—Geography 150, 160, 240, 400. Real differentiation of natural and cultural phenomena that affect the world's political organization.

99 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

Minimum prerequisites: A bachelor's degree and consent of instructor.

570 Studies in the Nature of Geography (3)

Seminar in the history, objectives, and methods of geography.

571 Studies in Regional Geography (3)

Seminar on selected regions of the world.

575 Studies in Human Geography (3)

Seminar on selected topics pertaining to the geography of man.

580 Studies in Physical Geography (3)

Seminar on nature, origin, and areal occurrence of the physical qualities of the land (climate, land forms, soils, and vegetation).

599 Graduate Project (3)

GEOLOGY

(In the Division of Science and Mathematics)

TAFF: Richmond (Department Head), Ehlig, Meade, Stout

BACHELOR'S DEGREE CURRICULUM

Bachelor of Science Major in Geology

The bachelor of science major (132 units) is designed for students who plan professional geological careers in government and industry or graduate study in geology. The following requirements are in addition to the college requirements in general education.

Lower Division

Geology 101—Physical Geology.....	4 units
Geology 102—Historical Geology.....	4 units
Geology 201—Mineralogy and Crystallography.....	4 units
Mathematics 100—Basic Mathematical Analysis.....	4 units
Mathematics 201—Analytic Geometry & Calculus I.....	4 units
Chemistry 101—General Chemistry.....	5 units
Chemistry 102—General Chemistry and Qualitative Analysis.....	5 units
Physics 201 and Physics 202 <i>or</i>	
Physics 101 and Physics 102.....	8 units
Engineering 202—Plane Surveying.....	3 units
Physical Science or Mathematics elective *.....	4 units

Upper Division

Geology 401—Petrology.....	4 units
Geology 410—Structural Geology.....	4 units
Geology 430—Stratigraphy.....	3 units
Geology 431—Invertebrate Paleontology.....	4 units
Geology 441—Optical Mineralogy.....	4 units
Geology 460—Campus Field Geology.....	3 units
Geology 461—Summer Field Geology.....	6 units
Geology 497—Senior Problem.....	2 units
Select <i>one</i> course from the following.....	3 units
Geology 411—Economic Geology (3)	
Geology 432—Micropaleontology (3)	
Geology 442—Petrography (3)	78 units

Geology students who wish to concentrate in paleontology may, with advisement, substitute as much as 12 units of biological science for 12 units in the geology program, as follows:

- 4 units of biology for 4 units of optical mineralogy
- 4 units of biology for 4 units of mathematics
- 4 units of biology for 4 units of required physical science electives

One course beyond the beginning year in mathematics, chemistry, or physics.

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR GEOLOGY MAJOR (B.S.)

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Geol. 101—Physical Geology.....	4	Geol. 102—Historical Geology	4
Chem. 101—Gen. Chemistry.....	5	Chem 102—Gen. Chemistry & Qual. Analysis	5
Math. 100—Basic Math. Anal.....	4	Math. 201—Anal. Geom. & Calc. I	4
‡Engl. 150—Written Expr. <i>or</i>		‡Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A.....	3	Lang. Arts 150B.....	3

SOPHOMORE YEAR

Physical Science elective.....	4	Geol. 201—Mineral. & Crystall.	4
Physics 201 or 101.....	4	Physics 202 or 102.....	4
Engr. 202—Plane Survey.....	3	Govt. 150—Govt. & Amer. Soc.	3
Biol. Sci. 153—Prin. of Biology.....	3	Art 150—Art, Music, Dance.....	3
Phys. Educ. 150.....	1	Phys. Educ. elective.....	1

JUNIOR YEAR †

Geol. 401—Petrology	4	Geol. 441—Opt. Mineralogy.....	4
Geol. 431—Invertebr. Paleon.....	4	Geol. 410—Structural Geol.....	4
Geol. 460—Campus Field Geol.....	3	Psych. 150—Human Behavior.....	3
Phil. 150—Phil. Ideas.....	3	Hist. 250—U. S. History.....	3
H&S 350—Personal Health.....	2	Elective	3

SENIOR YEAR

Geol. 430—Stratigraphy	3	Geol. Elective *	3
Geol. 497—Senior Problem.....	2	Gen. Educ. electives.....	6
Gen. Educ. Soc. Sci. elective.....	3	Electives	6
Engl. 250—Understanding Lit.....	3		
Elective	4		

Bachelor of Arts Major in Geology

The bachelor of arts major is designed for students who may wish to elect some concentration in the liberal arts or in another science area. The following requirements are in addition to the college requirements in general education.

Lower Division

Geology 101—Physical Geology	4 units
Geology 102—Historical Geology	4 units
Geology 201—Mineralogy & Crystallography.....	4 units
Mathematics 100—Basic analysis	4 units
Mathematics 201—Analytic geom. & calc. I.....	4 units
Chemistry 101—General Chemistry	5 units
Chemistry 102—General Chemistry & Qualitative Analysis	5 units
Physics 201 and Physics 202 <i>or</i>	
Physics 101 and Physics 102.....	8 units

* Elective chosen from Geol. 442; Geol. 432; Geol. 411.

† Geol. 461—Summer Field Geology, six units (required for graduation; recommended at end of junior year).

‡ See "Note" on page 61.

Upper Division

Geology 401—Petrology	4 units
Geology 410—Structural Geology	4 units
Geology 431—Invertebrate Paleontology	4 units
Geology 460—Campus field geology	3 units
Geology electives with approval of advisor	9 units
	62 units

Students who choose the bachelor of arts major and who anticipate graduate study or a professional career in geology should elect the physics 201-202 sequence and, at the beginning of the junior year, plan with an adviser an elective core program in physics, chemistry, engineering, or mathematics.

COURSES OF INSTRUCTION**101 Physical Geology (4) Fall**

Elementary study of the earth, particularly its materials, structure, internal condition, and of the physical and chemical processes at work upon and within it. Lecture three hours; laboratory three hours.

102 Historical Geology (4) Spring

Prerequisite: Geology 101. Evolution of the continents, oceans, mountain systems, and other features of the earth; development of its animal and plant inhabitants. Lecture three hours; laboratory three hours.

201 Mineralogy and Crystallography (4) Spring

Prerequisite: Geology 101 (may be taken concurrently). Study of the nature, characteristics, and structure of the six crystal systems; 75-100 of the common minerals, their occurrence, origin, and associations. Lecture two hours; laboratory six hours.

401 Petrology (4) Fall

Prerequisites: Geology 201, 460 (may be taken concurrently). Study of the origin, occurrence and classification of the more common rocks with emphasis on hand lens identification. Lecture two hours; laboratory six hours.

410 Structural Geology (4) Spring

Prerequisites: Geology 401, 460. Structural features of sedimentary, igneous and metamorphic rocks; deformation of the earth's crust; applied practice in laboratory methods dealing with geological problems in three dimensions. Lecture two hours; laboratory six hours.

411 Economic Geology (3)

Prerequisite: Geology 101 or 386. Principles of the geologic occurrence of economic mineral resources. Topics may vary with interest and background of students. Lecture two hours; laboratory three hours.

420 Principles of Geology (3)

Prerequisite: A college course in science or permission of the instructor. Introduction to the principles of geology. Not open to geology majors or to students with credit in lower division geology.

421 Geology of California (3)

Prerequisite: Geology 101, 102, or 386. Emphasizes geologic history of California with brief treatment of stratigraphy, structure, and economic geology.

430 Stratigraphy (3)

Prerequisite: Geology 102. Characteristics and origin of sedimentary deposits, classification of stratigraphic units, facies, unconformities, and principles of correlation. Lecture two hours; laboratory three hours.

431 Invertebrate Paleontology (4)

Prerequisites: Geology 102. Characteristics and evolution of the important fossil invertebrate animals, and fundamentals of stratigraphical paleontology. Lecture two hours; laboratory six hours.

432 Micropaleontology (3)

Prerequisite: Geology 431. Introduction to the study of foraminifera and their practical application in petroleum geology. Lecture two hours; laboratory three hours.

441 Optical Mineralogy (4) Spring

Prerequisite: Geology 201. Elementary study of optical properties of crystals with emphasis upon the polarizing microscope, and systematic study of important silicate minerals and their determination by optical methods. Lecture two hours; laboratory six hours.

442 Petrography (3)

Prerequisite: Geology 441. Use of petrographic microscope in identifying and classifying rocks and in determining the origin and geologic history of rocks and rock masses. Lecture one hour; laboratory six hours.

460 Campus Field Geology (3) Fall

Prerequisite: Geology 401 (may be taken concurrently). Introduction to geologic field methods and instruments. Preparation of geologic maps and writing of geologic reports. Lecture one hour; laboratory six hours.

461 Summer Field Geology (6) Summer

Prerequisites: Geology 401, 410, 460. Six or seven weeks of field work in an area of geologic interest. The course may be completed at this or another college.

497 Senior Problem (2)

Prerequisites: Geology 401, 410, 460. Progress reports and a final written report based upon individual study of an applied geological problem.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GERMAN

(In the Division of Language Arts)

STAFF: Griessbach.

Students entering Los Angeles State College from high school with four years of German are permitted to register in German 200B; those entering with three years, in German 200A; those with two years, enter German 100B; those with one year or less, enter German 100A. Full year courses in German completed in high school may not be repeated for graduation credit.

BACHELOR'S DEGREE CURRICULUM

A major in German is not offered at the present time.

General Secondary Teaching Minor

A minor in German is being planned. For information consult the Foreign Language Department Head.

COURSES OF INSTRUCTION

100A Elementary German I (4)

Methodical presentation of the structure of the language through hearing, speaking, reading, and writing German.

100B Elementary German II (4)

Prerequisite: German 100A, or equivalent. Oral and written treatment of graded reading material with purpose of reviewing structure, and increasing proficiency in understanding, speaking, reading, and writing German.

150 Basic Patterns in German (3) (General Education)

No prerequisite. Beginning course with emphasis on understanding and speaking the German used in everyday situations. Introduction to aspects of the history, culture, and psychology of the German people. This is a one semester terminal course for students who have no knowledge of German. This course cannot be substituted for German 100A.

200A Intermediate German I (4)

Prerequisite: German 100B, or equivalent. Transition from graded reading material to contemporary literary and newspaper German. Broadening of speaking and reading vocabulary.

200B Intermediate German II (4)

Prerequisite: German 200A, or equivalent. Germany today: Reading of contemporary German short stories and newspaper items. Short student talks and papers to increase fluency in speaking and writing German.

GOVERNMENT

(In the Division of Social Sciences)

STAFF: Black (Department Head), Callahan, Dvorin, Fishman, Hopper, Kommers, McEnroe, Misner, Potter, Rusch, Sandler, Warren

BACHELOR'S DEGREE CURRICULA

Major in Government

Four options in the government major, each representing a different objective, are offered.

1. Preprofessional and professional training for entrance into government service as a career, on the federal, state, or local government levels, or for positions on the research or administrative staffs of quasi-public or endowed organizations.
2. Foundational training for entrance into a graduate school of law.
3. Foundational training for careers in the field of international relations.
4. A general program, encompassing such ultimate objectives as teaching in junior colleges, entrance into politics, citizenship participation, liberal arts training, and pregraduate study.

Work-study credit is available to government majors serving as interns in governmental agencies in the Los Angeles area. In many instances these internships must be attained through civil service screening tests conducted by the respective governmental agencies.

Lower Division

Lower division government requirements for all areas of concentration include 6 units of introductory government courses and elementary statistics (Government 201AB, and Sociology 210, or equivalents).

Students electing public service (concentration 1), are required to complete elementary accounting; students electing pre-law (concentration 2), are required to complete a year of United States history, or English history, or history of western civilization (preferably one of two former), and elementary accounting; students electing international relations (concentration 3) are required to have 8 units in one foreign language, and are urged to have an additional year's study in that or a second foreign language; students in general government (concentration 4), are required to have either elementary accounting or a year of a foreign language.

Upper Division

The Government Core (required of all government majors)

Government 305—American Federal Government 3 units

Government 413—American Political Thought (International Relations
option substitute Government 412—Political Theory) 3 units

Government 460—Principles of Public Administration 3 units

One of the Following 3 units

Government 414—Public Opinion and Lobbies (3)

Government 418—American Political Parties and Politics (3)

One of the Following 3 units

Government 426—International Law (3) (Option 3)

Government 440—Constitutional Law (3) (Options 2 or 4)

Government 476—Administrative Law (3) (Options 1 or 2)

15 units

Public Service Option: Advisers: Callahan, Dvorin, Misner

One of the Following 3 units

Government 303—State and Local Government (3)

Government 304—Municipal Government (3)

All of the Following

Government 463—Public Personnel Administration 3 units

Government 466—Public Financial Administration 3 units

English 406—Communication of Ideas 3 units

Select Two from the Following Courses 6 units

Government 417—Public Policy and the Economy (3)

Government 461—Municipal Administration (3)

Government 465—Principles of Employee Supervision (3)

Government 468—Public Welfare Administration (3)

Government 470—Public Relations in Government (3)

Government 472—Organization and Management (3)

18 units

Pre-Legal Option: Advisers: Black, Kommers

One of the Following 3 units

Government 303—State and Local Government (3)

Government 304—Municipal Administration (3)

One of the Following 3 units

Government 417—Public Policy and the Economy (3)

Business 485—Business and Government (3)

And ALL of the Following

Government 442—Anglo-American Legal Systems 3 units

History 479—Constitutional History of the U.S. 3 units

English 406—Communication of Ideas 3 units

Social Science 400—Scientific Methods in the Social Sciences 3 units

Economics 310—Economics of the Business Firm 3 units

21 units

International Relations Option: Advisers: Rusch, Sandler

Government 427—International Relations 3 units

Three of the Following 9 units

Government 425—U.S. Foreign Policy (3)

Government 428—International Organization (3)

Government 431—Governments of Latin America (3)

Government 432—Asian Governments (3)

Government 433—Great Britain and the Commonwealth (3)

Government 435—The Government of the Soviet Union (3)

<i>Two of the Following</i>	6 units
Government 475—Comparative Administration (3)	
Geography 481—Political Geography (3)	
History 478—Diplomatic History of the U.S. (3)	
Economics 406—Principles of International Trade (3)	

18 units

General Government Option: Advisers: Hopper, McEnroe, Warren	
6 courses in government or related fields (not more than 2 courses	
in related fields) chosen with approval of a Government adviser.....	18 units

SUGGESTED FOUR-YEAR COURSE SEQUENCES FOR GOVERNMENT MAJOR

Government Service Option

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Engl. 150—Written Expr. <i>or</i>		†Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3
Biol. Sci. 153—Prin. of Biology <i>or</i>		Biol. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151	3	Phys. Sci. 151	3
Govt. 200—Calif. St. & Local Govt.	2	Econ. 150—Econ. for the Citizen	3
Art 150—Art, Music, Dance	3	Phil. 150—Phil. Ideas	3
Phys. Educ. 150	1	Phys. Educ. elective	1
Elective	3	Elective	3

SOPHOMORE YEAR

Govt. 201A—Intro. to Pol. Sci.	3	Govt. 201B—Intro. to Pol. Sci.	3
Soc. 210—Elem. Soc. Statistics	3	*Bus. 200A—Prin. of Acctng.	3
Biol. Sci. 154—Prin. of Biology <i>or</i>		Gen. Educ. Soc. Sci. elective	3
Phys. Sci. 152	3	Electives	7
Hist. 250—U.S. History	3		
Elective	3		

JUNIOR YEAR

Govt. 305—Amer. Fed. Govt.	3	Govt. 460—Prin. of Publ. Adm.	3
Govt. 413—Amer. Pol. Thought	3	Govt. 303—St. & Local Govt.	3
Engl. 250—Understanding Lit.	3	H&S 350—Personal Health	2
Govt. 414—Publ. Opin. & Lobbies		Engl. 406—Commun. of Ideas	3
<i>or</i> Govt. 418—Amer. Pol. Parties	3	Electives	4
Elective	4		

SENIOR YEAR

Govt. 417, 461, 465, 468, 470, or 472	3	Govt. 466—Publ. Fin. Admin.	3
Govt. 463—Publ. Pers. Admin.	3	Govt. 417, 461, 465, 468, 470, or	
Math. 353—Math. for Gen. Educ.	3	472	3
Electives	6	Gen. Educ. elective	3
		Electives	3
		Govt. 476—Admin. Law	3

Recommended.

See "Note" on page 61.

Pre-Legal Option**FRESHMAN YEAR**

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
*Engl. 150—Written Expr. <i>or</i>		*Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3
Biol. Sci. 153—Prin. of Biology <i>or</i>		Biol. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151	3	Phys. Sci. 151	3
Gen. Educ. Elective	3	Art 150—Art, Music, Dance	3
Hist. 250—U.S. History	3	Phys. Educ. elective	1
P.E. 150	1	Phil. 150—Phil. Ideas	3
Elective	3	Elective	3

SOPHOMORE YEAR

Govt. 201A—Intro. to Pol. Sci.	3	Govt. 201B—Intro. to Pol. Sci.	3
Bus. 200A—Prin. of Acctng.	3	Bus. 200B—Prin. of Acctng.	3
Soc. 210—Elem. Soc. Statistics	3	Amer. or Engl. History	3
Biol. Sci. 154—Prin. of Biology <i>or</i>		Gen. Educ. Soc. Sci. elective	3
Phys. Sci. 152	3	Econ. 201—Prin. of Econ.	3
Amer. or Engl. History	3	Elective	1

JUNIOR YEAR

Gen. Educ. elective	3	Govt. 460—Prin. of Publ. Admin.	3
Govt. 413 <i>or</i> Govt. 412	3	Govt. 303 <i>or</i> Govt. 304	3
Engl. 250—Understanding Lit.	3	Hist. 479—Const. Hist. of U.S.	3
Govt. 414—Publ. Opin. & Lobbies		H&S 350—Personal Health	2
<i>or</i> Govt. 418—Amer. Pol. Parties	3	Engl. 406—Commun. of Ideas	3
Elective	3	Elective	2

SENIOR YEAR

Govt. 440—Constitutnl. Law	3	Govt. 417—Publ. Policy & the	
Econ. 310—Econ. of Bus. Firm	3	Econ. <i>or</i> Bus. 485	3
Gen. Educ. elective	3	Soc. Sci. 400—Applied Logic	3
Electives	3	Electives	9
Govt. 442—Anglo-Amer. Legal Sys.	3		

International Relations Option**FRESHMAN YEAR**

*Engl. 150—Written Expr. <i>or</i>		*Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3
Biol. Sci. 153—Prin. of Biology <i>or</i>		Biol. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151	3	Phys. Sci. 151	3
Govt. 200—Calif. St. & Local Govt.	2	Hist. 250—U.S. History	3
Foreign Language	4	†Foreign Language	4
P.E. 150	1	Phys. Educ. elective	1
Elective	2	Elective	2

SOPHOMORE YEAR

†Foreign Language	4	*Foreign Language	4
Govt. 201A—Intro. to Pol. Sci.	3	Govt. 201B—Intro. to Pol. Sci.	3
Soc. 210—Elem. Soc. Statis.	3	Econ. 150—Econ. for the Citizen	3
Art 150—Art, Music, Dance	3	Phil. 150—Phil. Ideas	3
Biol. Sci. 154—Prin. of Biology <i>or</i>		Gen. Educ. Soc. Sci. elective	3
Phys. Sci. 152	3		

* See "Note" on page 61.

† Recommended.

JUNIOR YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Gen. Educ. elective	3	Govt. 414—Publ. Opin. & Lobbies <i>or</i>	
Govt. 305—Amer. Fed. Govt.	3	Govt. 418—Amer. Pol. Parties	3
Govt. 412—Political Theory	3	Govt. 427—Internat. Relations	3
Engl. 250—Understanding Lit.	3	Geog. 481—Political Geog.	3
Elective	3	H&S 350—Personal Health	2
		Elective	4

SENIOR YEAR

Govt. 430—Govt. of West. Europe ..	3	Govt. 431, 432, 433, 435 <i>or</i> 436	3
Hist. 478—Diplomat. Hist. of U.S. ..	3	Govt. 426—Internat. Law	3
Gen. Educ. elective	3	Econ. 406—Internat. Trade	3
Govt. 425—U.S. Foreign Policy <i>or</i>		Govt. 460—Prin. of Publ. Admin.	3
Govt. 428—Internat. Org.	3	Electives	3
Electives	3		

General Government Option**FRESHMAN YEAR**

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
**Engl. 150—Written Expr. <i>or</i>		**Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3
Biol. Sci. 153—Prin. of Biology <i>or</i>		Biol. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151	3	Phys. Sci. 151	3
Art 150—Art, Music, Dance	3	Phil. 150—Phil. Ideas	3
Hist. 250—U.S. History	3	Phys. Educ. elective	1
P.E. 150	1	Elective	6
Elective	3		

SOPHOMORE YEAR

Govt. 201A—Intro. to Pol. Sci.	3	Govt. 201B—Intro. to Pol. Sci.	3
Soc. 210—Elem. Soc. Statistics	3	Econ. 150—Econ. for Citizen	3
Amer. or English History	3	Amer. or English History	3
Biol. Sci. 154—Prin. of Biology <i>or</i>		Gen. Educ. Soc. Sci. elective	3
Phys. Sci. 152	3	Electives	4
Electives	4		

JUNIOR YEAR

Gen. Educ. elective	3	Govt. 460—Prin. of Publ. Admin.	3
Govt. 305—Amer. Fed. Govt.	3	Govt. 426, 440, <i>or</i> 476	3
Govt. 413—Amer. Pol. Thought	3	H&S 350—Personal Health	2
Engl. 250—Understanding Lit.	3	Govt. 303 <i>or</i> 304	3
Govt. 414—Publ. Opin. & Lobbies <i>or</i>		Electives	4
Govt. 418—Amer. Pol. Parties	3		

SENIOR YEAR

Govt. electives	6	Gen. Educ. elective	3
Electives	9	Govt. electives	6
		Electives	6

MASTER OF ARTS DEGREE

The master of arts degree program is built upon the foundation of an undergraduate major in government or political science and is designed to provide systematic study in government and related fields at an advanced level for students teaching in this field, students preparing

* See "Note" on page 61.

for the doctorate, or for students interested or working in the governmental area who wish to pursue the discipline at an advanced level.

Prerequisites: Graduate standing, with an undergraduate major in government or political science. Students with majors in related fields may undertake the M. A. in government upon completion of sufficient work in the field of government as approved by the Department of Government, to prepare them for graduate courses.

Requirements: A total of 30 units, with work offered in four fields of government, or three government fields and one related field, the program to be prepared by student and adviser with the approval of a departmental committee.

1. Government 510—Seminar in Political Theory 3 units
2. Courses selected from at least two of the following fields selected with approval of an adviser 6 units
 - Public Administration (Government 560, 561, 563, 590)
 - Politics and Legislation (Government 518)
 - Comparative Government (Government 530)
 - International Relations (Government 527)
 - Public Law (Government 505YZ)
 - American Government (Government 505YZ)
3. One of the following or one additional field from "2" above 3 units
 - History (500 series)
 - Economics (500 series)
 - Sociology (500 series)
 - Geography (500 series)
4. Additional government courses at the 400 or 500 level as approved by an adviser (3 units may be devoted to graduate project) 12 units
5. Courses in related fields (must be outside government and may be partially satisfied in "3" above) 6 units
6. Comprehensive examination of 3 hours each in four selected fields with minimum grade of B on each examination. (A thesis in lieu of the examination will be authorized for students who present a project which the department deems worthy of study, but only if the student can indicate in an oral examination his competence in four of the fields indicated in 1, 2, or 3 above.)

MASTER OF SCIENCE DEGREE

The master of science degree in public service with an option in government is offered to provide present and future public service employees with the administrative skills and knowledge necessary for the competent direction of personnel, the administration of financial controls, and the co-ordination of agency functions. It consists of a core program and other graduate work selected to assist the student in meeting his objectives.

1. *Prerequisites:* Graduate standing with appropriate undergraduate training in government and related fields.
2. General Core:
 - Government 460 or 461 3 units
 - Government 560 or 561 3 units
 - Sociology 411 or 510 3 units
 - Government 563 3 units
 - Government 590 3 units
3. "500" courses in Government or related fields approved by adviser 6 units
4. Additional courses approved by adviser 9 units
5. Comprehensive written examination.

6. In addition to course requirements, the student must complete a one-year internship in government, or an approved field project. (This requirement may be waived if the candidate holds, or has held, a position entailing managerial or administrative responsibilities in a public agency.)

COURSES OF INSTRUCTION

Prerequisites: For upper division courses (400 and above) one year of college political science or consent of instructor.

***† 150 Government and American Society (3) (General Education)**

Not open to students who have completed college courses in introductory U.S. Government. The American political system; emphasis on its social setting and the problems of a democratic political system in action.

† 200 California State and Local Government (2)

The functions and structure of California state and local governmental units; current aspect of the governmental process and problems in this State.

*** 201A Introduction to Political Science (3)**

Scope of the field of government. Basic elements of government: origins of the State; constitutions; law and legal systems; legislatures; bureaucracies. Nature of citizenship. Changing roles and responsibilities of government in American life.

201B Introduction to Political Science (3)

Survey of contemporary governmental ideologies and philosophies. Political parties and organizations. Introduction to international relations and international politics.

†303 State and Local Government (3) Fall, Spring

Examination of the nature of state politics; analysis of legislative, judicial and administrative organization; study of local government in metropolitan areas; all with reference to California.

†304 Municipal Government (3) Spring

Contemporary American municipalities and their relationships to other governmental jurisdictions, particularly state governments. Aspects of the California State Constitution with reference to such municipal subjects as home rule, referendum, initiative, recall, metropolitan government.

***305 American Federal Government (3) Fall, Spring**

Policy-making and administrative structures and operations of the Federal Government. Makeup of Congress; the electoral college; committee composition. Executive departments and agencies; regulatory commissions; government corporations.

* Designates a course which satisfies the United States Constitution requirement.

† Designates a course which satisfies the California state and local government requirement.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the government internships program. Analysis and reports of the student's performance regular group meetings.

412 Political Theory (3) Fall

European political thinking from Plato to the present with emphasis on modern contributions.

413 American Political Thought (3) Spring

American political thinking from the colonial period to the present, with emphasis on twentieth century contributions.

414 Public Opinion and Lobbies (3) Spring

Tactics and aims of pressure groups, particularly lobbies, in the influencing of American public sentiment. Political significance of public opinion polls.

417 Public Policy and the Economy (3) Spring

Government regulation of economic activity. Development of governmental controls, programs, and sanctions. Functions of licensing and inspection. Changing concepts of the public welfare.

418 American Political Parties and Politics (3) Fall

The rise of American political parties, including third parties; party structure, operation, control, and political leadership.

419 Legislative Process (3)

Prerequisites: Government 305 and Government 303 or equivalents. Analysis of structure, organization, and functioning of the United States Congress and American state legislatures (emphasizing California).

425 United States Foreign Policy (3) Fall, Spring

Theory and practice of contemporary American foreign policy.

426 International Law (3) Fall

Regulation of international relations in peace and in war.

427 International Relations (3) Fall, Spring

Theories and practices of international politics today and yesterday.

428 International Organization (3) Spring

Organizations, methods, and movements leading to the establishment of international law and order.

430 Governments of Western Europe (3) Fall

The political institutions, ideologies, and problems of the major European countries.

431 Governments of Latin America (3) Fall

Political concepts, structures, and trends in the governments of Mexico, Brazil, Argentina, Chile, and others selected for study by the instructor.







MUSIC—Madrigals (above), and Brass Choir (below)





432 Asian Government (3) Spring

The political institutions and problems of selected Asian nations.

433 British Government and Commonwealth (3)

Examination of British political system, including the Commonwealth, with emphasis on the origin, development, structure, and functions of its political institutions.

435 The Government of the Soviet Union (3)

A study of the political institutions, movements, doctrines, practices, and foreign relations of the Soviet Union.

436 Governments of Sub-Saharan Africa (3)

Examination and analysis of Africa's political and social history. Contemporary governmental institutions and politics of selected countries south of the Sahara. Africa in world affairs.

***440 Constitutional Law (3) Fall**

Basic principles of American constitutional law, and the role of the United States Supreme Court in our political and social development.

442 The Anglo-American Legal System (3) Fall

Development of our legal system from Anglo-Saxon and Roman roots to a case system of law and equity based on English and American common law.

460 Principles of Public Administration (3) Fall, Spring

The executive function in government; survey of the principles of administrative organization, personnel management, financial administration, administrative law, public relations. Problems and trends in government as a career.

461 Municipal Administration (3) Fall, Spring

Prerequisites: Government 460 and 304 are recommended. Analysis of the problems and functions of such units of local government as municipalities, counties, special districts, school districts, and such administrative agencies as housing authorities, police, fire, and public health departments.

463 Public Personnel Administration (3) Fall, Spring

Growth of the merit system concept and development of the civil service; recruitment procedures and examinations; position classification; salary structures; retirement plans; in-service training; supervision; employee organizations.

465 Principles of Employee Supervision (3) Spring

Prerequisite: Consent of instructor. A series of discussions on government employee situations and problems from the point of view of the lower-level supervisor.

* Designates a course which satisfies the United States Constitution requirement.

466 Public Financial Administration (3) Fall

The role of financial administration and budgeting in determination of governmental policy, in administrative planning and management, in control of government operations, in intergovernmental relations, and in relation to the private economy.

468 Public Welfare Administration (3) Spring

Internal administration of government programs such as social security, child care, corrections, pensions. Operation of the grant-in-aid principle. Interagency relationships; problems of field coordination.

470 Public Relations in Government (3) Fall

Principles and media used to inform the public of governmental services and programs. Public relations as a staff function. The roles of "information officer," "public service features," public information counters. Agency case histories.

472 Organization and Management (3) Fall

Prerequisite: Government 460 or equivalent. Special study of governmental organization and the techniques and processes of public management. History of the public management movement. Analysis of the problems of control, delegation, and coordination. Methods and procedures of governmental reorganizations.

474A Introduction to City Planning (3)

Prerequisites: Government 303 and 460, or consent of instructor. Functions and administrative structures of city, county, regional and state planning agencies. Economic, social, legal and aesthetic factors in the planning process. Development of the general or master plan.

474B Techniques of City Planning (3)

Prerequisite: Government 474A or consent of instructor. Techniques and administrative structure for the implementation of city, county, regional and state plans. Regulation of land use and the division of land. Urban renewal. Public housing.

475 Comparative Administration (3)

Prerequisites: Government 460 and one of the following: 430, 431, or 432. The evolution, processes and techniques of administrative systems of selected foreign nations compared to American practice. Analysis of systems of colonial administration, international administration, and technical assistance administration.

476 Administrative Law (3) Spring

Process in administrative adjudication, regulation, and rulemaking; duties and liabilities of public officers; appeal procedures; trends in regulation.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and

oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

Minimum prerequisites: A bachelor's degree and superior academic performance in government.

505Y-Z Seminar in Contemporary American National Government (3)

Analysis of selected issues and problems of national significance in the United States.

510 Seminar in Political Theory (3)

Prerequisite: Government 412 or 413. Studies of selected topics in political philosophy.

518 Seminar in Political Problems (3)

An analysis of selected aspects of the organization and functioning of American political parties, interest groups, and voting behavior.

527 Advanced Studies in International Relations (3)

Examination of special problems in international politics.

530 Comparative Government (3)

Prerequisites: Six units from Government 430, 431, 432, 427, or equivalent. Special problems, practices, customs, and movements in a selected number of nations—both major and minor ones—with emphasis on the use of primary source material in the field.

560 Seminar in Public Administration (3)

Advanced studies in administrative organization—delegation, field co-ordination, accountability, and controls. Values, ends, structures and arrangements in large scale governmental management in a democracy. Growth of the administrative corps. Trends in administrative research.

561 Seminar in State and Local Administration (3) Fall

Prerequisites: Graduate standing and Government 460 or 461. Advanced studies in state and local organizational administration; financial administration; fiscal controls; relationships between states and subdivisions of government, particularly subventions, civil service, retirement systems, taxation, and assessment. Case studies of problems peculiar to California and metropolitan Los Angeles.

563 Advanced Problems in Public Personnel Administration (3)

Case studies of the more complicated personnel problems encountered in governmental agencies, including examination of the varying roles of boards, commissions, and official legislative bodies. New frontiers in personnel research and personnel legislation.

590 Philosophy of Public Service (3) Spring

Prerequisites: Graduate standing, Government 560 or 561, *and* consent of the Head of the Department of Government. Past and present philosophies of the public service; the vocation of public service; bureaucracy in modern democratic societies; problems of governmental planning in modern society; social-psychological aspects of public service; ethical aspects of public service; case studies of decision-making.

599 Graduate Project (3)

HEALTH AND SAFETY EDUCATION

(In the Division of Health and Safety, Physical Education,
Recreation and Athletics)

STAFF: Elliot (Department Head), Fodor, Gmar, Jacobsohn, Osborn, Toms,
Warner, Whiteley. *Part-time*: Lewis, Schroeder, Torribio, Zahrt.

BACHELOR'S DEGREE CURRICULUM

No major offered.

General Secondary Teaching Minor in Health Education

Designed for students preparing to become secondary school teachers in health and safety subjects. See also pages 151-152 for professional education requirements. A teaching major in a different teaching field is also required for the general secondary credential.

Lower Division

Physiology 201 <i>or</i>	
Anatomy 201	3 units
First Aid 201	1 unit

Upper Division

Health and Safety Education 460—School Health Education	3 units
Health and Safety Education 463—Principles of Community Health	2 units
Health and Safety Education 490—Administration of School Health Programs	2 units
Electives selected with the approval of the adviser from the fields of mental health, family life education, nutrition, safety education, and related fields	9 units
	—
	20 units

MASTER OF ARTS DEGREE

Provides preparation for leadership and professional advancement in the Health Sciences and Safety Education fields.

Prerequisite: Baccalaureate degree with sufficient courses in health, safety, and biological science to provide a foundation for advanced work, or professional experience in the fields of health or safety.

1. Required courses:

H.&S.Ed. 580—Seminar in Health and Safety Education Research	3 units
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2. H.&S.Ed. 599—and/or other "500" level courses in health education..... 9 units
3. Additional upper division or graduate courses within the Department of Health and Safety Education or related health fields..... 3 units
4. Courses outside the Division of Health and Safety, Physical Education, Recreation and Athletics..... 6 units
5. Electives
5. The comprehensive examination is required of all candidates who do not take H.&S.Ed. 599.

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30 units

COURSES OF INSTRUCTION**201 First Aid (1) Fall, Spring**

Standard Red Cross first aid.

350 Personal Health (2) (General Education)

Beneficial and detrimental factors of environment and their effect upon the body; ways in which these environmental factors may be utilized for health and safety.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

401 Methods of Teaching First Aid (2) Fall, Spring

Prerequisite: Red Cross certificate in standard first aid. American Red Cross course which qualifies students in Advanced and Instructor First Aid.

460 School Health Education (3) Fall, Spring

Prerequisite: Health education or equivalent. Responsibilities of the classroom teacher in school health education program. Co-operation with medical services, provision of healthful classroom environment, health instruction.

463 Principles of Community Health (2) Fall, Spring

Prerequisite: Health education or equivalent. Historical and modern efforts to meet health needs of the community.

474 Driver Education and Driver Training (3) Fall, Spring

Prepares students to meet the state code requirements for teaching driver education and driver training. Persons enrolled must be qualified operators of motor vehicles in California.

475 Safety Education (2) Fall, Spring

Safety education and accident prevention. Fulfills state requirement in public safety and fire prevention for graduation from state colleges. Includes techniques and materials for instruction.

490 Administration of School Health Programs (2) Fall

Fulfills the state code requirements for a health and development credential and for a teaching minor in health education. Principles and practices of supervision and administration in school health programs. Includes legal provisions relating to school health.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES**560 Administration of Health and Safety Education (2)**

Fall, Spring

Prerequisite: Graduate standing. Organization, content, and evaluation of health and safety education programs. Administration and supervision of official and nonofficial agencies.

570 Appraisal and Guidance in Health and Safety Problems (2)

Fall, Spring

Prerequisite: Graduate standing. Designed for teachers, counselors, and health administrators. Techniques of appraisal and guidance. Analysis and interpretations.

580 Seminar in Health and Safety Education Research (3)

Fall, Spring

Prerequisite: Graduate standing. Investigation and analysis of research in health and safety education.

599 Graduate Project (3) Fall, Spring

HISTORY

(In the Division of Social Sciences)

STAFF: Guerrant (Department Head), Bonar, Burns, Catren, DeArmond, Greenwalt, Jones, Lindsey, McSeveney, Meyer, Nelson, Pratt, Smith, Steckmesser, Tipple.

BACHELOR'S DEGREE CURRICULUM

Major in History

The history major may be undertaken to attain professional, academic, or cultural objectives; such objectives include: an understanding of the past and its contributions to the present, preparation for graduate work and advanced degrees, proficiency in historical method and historical information in preparation for appointment as specialists in business, in government, and in cultural institutions.

Lower Division

History 101AB—Man in Civilization	6 units
History 202AB—American Civilization	6 units

Upper Division

(Courses must be selected in consultation with a history adviser.)

Twenty-four units selected as follows:

From any *one* group of group 1 through 6 6 units

From group 7 6 units

Six units in each of two other groups (1 through 11) 12 units

Group (1) Ancient

411, 412

Group (2) Medieval

421, 422

Group (3) Europe: Renaissance to present

430, 431, 432, 433

Group (4) European

437, 438

Group (5) Russia

445, 446

Group (6) England and British Empire

440, 441, 442

Group (7) American: Founding of colonies to present

471, 472, 473, 474, 475

Group (8) American

476, 477, 478, 479

Group (9) American West

481, 488, 489

Group (10) Latin America

461, 462, 466

Group (11) Far East

493, 494, 495

History 497 History Proseminar 3 units

Social Sciences and other related fields 9 units

48 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR HISTORY MAJOR

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
†Engl. 150—Written Expr. <i>or</i>		†Sp. 150—Written Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3
Hist. 101A—Man in Civil.	3	History 101B—Man in Civil.	3
Art 150—Art, Music, Dance	3	Govt. 150—Govt. & Amer. Soc.	3
Biol. Sci. 153—Prin. of Biology <i>or</i>		Biol. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151	3	Phys. Sci. 151	3
P.E. 150	1	Elective	4
Elective	3		

SOPHOMORE YEAR

Hist. 202A—Amer. Civilization	3	History 202B—Amer. Civilization ..	3
Biol. Sci. 154—Prin. of Biology <i>or</i>		H&S 350—Personal Health	2
Phys. Sci. 152	3	Phil. 150—Phil. Ideas	3
Engl. 250—Understanding Lit.	3	Gen. Educ. elective	3
Gen. Educ. elective	3	Elective	4
Elective	3		

JUNIOR YEAR

History 471, 472, 473, 474, or 475....	3	History 471, 472, 473, 474, or 475....	3
History requirement	6	History requirement	6
Psych. 150—Human Behavior	3	Social Science elective	3
*Foreign language	3-4	*Foreign language	3-4

SENIOR YEAR

History requirement	6	History 497—History Proseminar..	3
Social Science elective	3	Social Science elective	3
Gen. Educ. elective	3	Electives	6-7
Electives	3-4	Hist. 450—Senior Colloquium	3

MASTER OF ARTS DEGREE

The graduate program is built on the foundation of undergraduate preparation. The master's degree requires intensive directed study in history aimed at depth of understanding.

1. Prerequisites: 21 approved upper division units in history, including History 497, or equivalent, and 6 units in related fields.
2. Master's program:
 - a. History 501
 - b. History Seminars ("500" courses)
 - c. History electives: Other approved courses in the field of history;
may be upper division 400 courses
 - d. Approved courses outside field of history

3 units
12 units
9 units
6 units

* Recommended—not required.

† See "Note" on page 61.

e. Comprehensive examinations:

The comprehensive examinations cover four fields of history of which one *must* be from field 1, 2, or 3. The other may be from any of the other fields from 1 through 13 listed below:

1. United States to 1876
2. United States since 1850
3. Westward Movement and California
4. Greece
5. Rome
6. Early Medieval (to 1100)
7. Late Medieval (since 1100)
8. Modern Europe (1500 to 1789)
9. Modern Europe (1789 to present)
10. Latin America
11. British peoples
12. Russia
13. Far East

f. Demonstration of reading competency in historical literature in a foreign language.

COURSES OF INSTRUCTION

Lower Division

101A Man in Civilization (3)

The story of man from the beginning of historic times to close of the Middle Ages, including earliest civilizations; Hellenic and Roman periods; economic, political and social developments from the decline of the Roman Empire to the Renaissance.

101B Man in Civilization (3)

The story of man from the Renaissance to contemporary times. Includes commercial and industrial revolutions; social, cultural developments; and rise of the national state system.

202A American Civilization (3)

Survey of the development of the United States from the earliest colonial settlements through the Civil War. Outbreak of the Revolution; framing of the Constitution; the War of 1812; Jacksonian democracy; the sectional conflict between the North and South.

202B American Civilization (3)

Survey of the political, economic, and social transformation of the United States since the close of the Civil War. Includes the Reconstruction period; postwar industrial and business expansion; agrarian revolt; reform movement; the era of the New Deal; America's part in the two world wars.

250 United States History (3) (General Education)

Prerequisite: Government 150. Selected issues, problems, and ideas as focused around selected leaders from Alexander Hamilton and Thomas Jefferson to Herbert Hoover and Franklin Roosevelt.

Upper Division

Prerequisite: One year of college history or equivalent.

Exception: No prerequisite for History 476.

411 The Early Mediterranean World and Greece (3)

Political and cultural study of the ancient empires in the Mesopotamian and Egyptian areas, and of classical Greece.

412 History of Rome (3)

The development of Rome from earliest times. The rise and fall of the Roman Republic; the Empire to 476 A.D.

421 The Early Middle Ages (3)

Europe from the fall of the Roman Empire to the Thirteenth Century, the political, social, economic, and religious development of medieval Europe.

422 The Later Middle Ages (3)

The emergence of modern Europe and the period's cultural contributions to the modern era.

430 Renaissance to the Enlightenment (3)

Europe from the end of the medieval period to the Age of Reason in the mid-Eighteenth Century.

431 Europe: The Eighteenth Century (3)

Europe from the period prior to the French Revolution until the Congress of Vienna (1815).

432 Europe: The Nineteenth Century (3)

Europe from the Congress of Vienna to the outbreak of World War I.

433 Europe: The Twentieth Century (3)

Europe from the beginning of World War I to the present.

437 Social and Intellectual History of Europe (3)

The major social and intellectual aspects of the history of modern Europe.

438 Economic History of Europe (3)

Economic development of modern Europe, with special attention to industrial revolution. (Same as Economics 472.)

440 Early Modern England (3)

History of England from the fourteenth century to 1760 with emphasis upon constitutional, social, political, and economic developments.

441 England Since 1760 (3)

Historical development of England from the accession of George III until the present time.

442 The British Empire (3) Fall

Political and economic development of the British Empire since the late eighteenth century with major consideration given to the expansion of the colonial empire and the evolution of the modern empire-commonwealth.

445 Russia to 1801 (3)

Study of the development of the Russian state and peoples from earliest times to the accession of Alexander I.

446 Russia: 1801 to the Present (3)

Russian history in the nineteenth and twentieth centuries.

450 Senior Colloquium in History (3) (General Education)

This course is open only to senior or graduate students of demonstrated ability. Each semester a different theme or episode in history is examined thoroughly in the manner of an undergraduate seminar. Individual readings, written and oral reports, and discussion. Admission by consent of instructor.

461 Latin America: Colonial Period (3)

Prehistory of the Americas south of the United States. The European background, the period of the conquest, and colonial development to the time of the wars of independence.

462 Latin America: National Period (3)

Examination of the struggle for independence and the social, political, and economic development of the Latin America nations to the present.

466 Mexico (3)

Development of the Mexican people and nation since the days of the Aztecs; particular attention to social and cultural matters and to the more recent period.

471 The United States: Colonial Period (3)

History of the 13 colonies from their European origins to the close of the French and Indian Wars.

472 The United States: Federal Union (3)

Growth of independence in life, thought, and political union from 1763 through the War of 1812.

473 The United States: Sectionalism, Civil War and Reconstruction (3)

Gradual development of sectionalism, the growing cleavage between north and south, the Civil War and the story of reconstruction.

474 The United States: Emergence of the Modern Nation (3)

The rapid economic development of the Nation in the post-Civil War period, the acquisition of overseas territory, the rise of Progressivism to the outbreak of World War I.

475 The United States: A World Power (3)

The United States from 1914 to the present.

476 Economic History of the United States (3)

Historical study of American economic development; industrialization; national legislation in industry and commerce. (Same as Economics 471.)

477 Social and Intellectual History of the United States (3)

Survey and analysis of the important social and intellectual trends in America from the early colonial period to the present time.

478 Diplomatic History of the United States (3)

Foreign relations of the United States from colonial backgrounds to the contemporary scene, with special attention to recent diplomatic problems.

479 Constitutional History of the United States (3)

The Federal Constitution from the historical point of view. Major considerations: the Constitutional Convention, and constitutional controversies and changes since John Marshall.

481 The Westward Movement and the West (3)

The advance and characteristics of the American frontier from colonial times through the nineteenth century and the development of the West in the past half century.

488 California (3)

Political, economic, social, and intellectual history of California from Spanish times to the present, with emphasis upon current characteristics, problems, and trends.

489 Los Angeles (3)

Los Angeles from pueblo to metropolis with emphasis on the history of Southern California.

493 Traditional China (3)

Survey of Chinese civilization from earliest times, through traditional empires and western impact, to end of Imperial rule in 1912.

494 Modern China (3)

Survey of China since 1912: the Republic and its later interpretations by the Nationalist and Communist regimes.

495 Japan (3)

Survey of traditional, modernized, and postwar Japan.

497 History Proseminar (3)

Senior course: Required of all history majors. Introduction to historical method. Prepares the student for graduate seminar work in history; utilizes historical method and bibliography to equip the history major for certain specialized positions in business, government, and cultural institutions.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

Minimum prerequisites: A bachelor's degree, superior academic performance in history, and History 497 or equivalent.

501 Historiography and Bibliography (3)

Development of historical writing, with an examination of the works of representative historians and various philosophies of history.

533 Seminar in Europe: Recent (3)

Prerequisite: 6 units of European history or equivalent. Readings, discussions and thesis style research paper.

561 Seminar in Modern Mexico

Prerequisite: History 461 and 462 or equivalent. Readings, discussion and thesis style research paper.

571 Seminar in United States: Early (3)

Prerequisite: 6 units in American history or equivalent. Readings, discussion and thesis style research paper.

575 Seminar in United States: Recent (3)

Prerequisite: 6 units in American history or equivalent. Readings, discussion and thesis style research paper.

577 Seminar in United States: Cultural and Intellectual (3)

Prerequisite: 6 units in American history or equivalent. Readings, discussion and thesis style research paper.

581 Seminar in United States: The West (3)

Prerequisites: History 481 and 488 or equivalent. Readings, discussion and thesis style research paper.

591 Seminar in Far East: Recent (3)

Prerequisite: History 493, 494, or 495 or equivalent. Readings, discussion and thesis style research paper.

599 Graduate Project (3)

HOME ECONOMICS

(In the Division of Technical Sciences)

STAFF: Gregory (Department Head), Brooks, Chamberlain, Graves, Miller, Rhinesperger.

The home economics programs are designed to prepare the individual for a more useful and satisfying personal, family, and community life, as well as for a professional career. The program supplements a broad, cultural general education with practical skills and aesthetic values related to the home and family. For those who wish to teach, there is a program leading to the special or general secondary teaching credential. For those desiring a home economics in business career, a program has been developed in conjunction with business firms and utility companies.

BACHELOR'S DEGREE CURRICULA

Major in Home Economics

Designed for the student who desires intensive preparation for home and family life.

Lower Division

*H.Ec. 101—Fundamental Principles of Clothing Construction.....	3 units
H.Ec. 102—Textiles, Wardrobe Planning and Construction.....	4 units
H.Ec. 130—Marriage and Family Relationships.....	3 units
H.Ec. 210—Food Preparation and Nutrition.....	4 units
H.Ec. 220—The Child	2 units

Upper Division

H.Ec. 310—Meal Management and Hospitality.....	4 units
H.Ec. 341—Organizing and Managing the Home.....	3 units
H.Ec. 360—Color and Design in Home and Furnishings.....	3 units
H.Ec. 440—Family Finance	3 units
Select from the following.....	10 units
H.Ec. 400—Tailoring (2)	
H.Ec. 311—Advanced Foods (3)	
H.Ec. 349—Home Living (2)	
H.Ec. 461—Home Furnishing Lab. (3)	
Nursing 101—Home Nursing (2)	
Select from the following.....	10 units
Art 483—Interior Design (2)	
Education 410—Educational Psychology (3)	
English 430—Interpreting Children's Literature (3)	
Language Arts 464—Contemporary Dramatic Arts (3)	
Philosophy 304—Ethics (3)	
Philosophy 338—Comparative Religions (3)	
Sociology 476—Child Welfare (3)	

49 units

* Students with comparable experience may be excused from H.Ec. 101 by satisfactory achievement on a placement test.

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR HOME ECONOMICS MAJOR (B.A. DEGREE)

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
*Engl. 150—Writ. Expr. <i>or</i>		*Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3
Biol. Sci. 153—Prin. of Biology <i>or</i>		Biol. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151	3	Phys. Sci. 151	3
†H. Ec. 101—Fundamental Prin. of Clothing Construction	3	H. Ec. 102—Textiles, Wardrobe.....	4
H. Ec. 130—Marriage & Family.....	3	Art 150—Art, Music, Dance.....	3
Elective	2-3	Elective	2
P.E. 150	1	Phys. Educ. elective	1

SOPHOMORE YEAR

Biol. Sci. 154 <i>or</i>		Hist. 250—U. S. History.....	3
Phys. Sci. 152	3	Phil. 150—Phil. Ideas	3
Govt. 150—Govt. & Amer. Soc.	3	Gen. Educ. Soc. Sci. elective.....	3
Engl. 250—Understanding Lit.	3	H. Ec. 210—Food Prep. & Nutr.	4
Psych. 150—Human Behavior.....	3	Elective	3
H. Ec. 220—The Child	2		
Elective	2		

JUNIOR YEAR

Gen. Educ. elective	3	H. Ec. 341—Org. & Managing the Home	3
H. Ec. 310—Meal Mgmt.	4	H. Ec. electives, page 225.....	2-4
H. Ec. 360—Color, Design, H.F.	3	Related electives, page 225.....	4-6
H. Ec. elective, page 225.....	3	Electives	2-6
H&S 350—Personal Health	2		

SENIOR YEAR

Gen. Educ. elective	3	H. Ec. elective, page 225.....	2-3
H. Ec. 440—Family Finance.....	3	Related elective, page 225.....	2-3
H. Ec. elective, page 225.....	2-3	Electives	10-12
Related elective, page 225.....	2-3		
Elective	4		

Special or General Secondary Teaching Major in Home Economics

Designed for the student who wishes to prepare for a career in teaching in the field of home economics.

Lower Division

† H. Ec. 101—Fundamental Principles of Clothing Construction	3 units
H. Ec. 102—Textiles, Wardrobe Planning and Construction	4 units
H. Ec. 130—Marriage and Family Relationships	3 units
H. Ec. 210—Food Preparation and Nutrition	4 units
H. Ec. 220—The Child	2 units
Nursing 101—Home Nursing	2 units

Upper Division

H. Ec. 400—Tailoring	2 units
H. Ec. 440—Family Finance	3 units
H. Ec. 360—Color and Design in Homes and Furnishings	3 units

* See "Note" on page 61.

† Students with comparable experience may be excused from Home Econ. 101 by satisfactory achievement on a placement test.

H. Ec. 461—Home Furnishing Laboratory.....	3 units
H. Ec. 310—Meal Management and Hospitality.....	4 units
H. Ec. 320—Child Care Laboratory.....	2 units
H. Ec. 341—Organizing and Managing the Home.....	3 units
H. Ec. 349—Home Living Experience.....	2 units

 40 units

Recommended electives

Art 432—Textiles (2)
Art 447—Weaving (2)
Art 473—Costume Design (2)
Art 483—Interior Design (2)
H. Ec. 430—Household Equipment (3)
English 430—Interpreting Children's Literature (3)
Language Arts 464—Contemporary Dramatic Arts (3)
Philosophy 304—Ethics (3)
Philosophy 338—Comparative Religions (3)
Sociology 476—Child Welfare (3)
Speech 410—Public Speaking (3)
H. Ec. 470—Demonstration Techniques (3)

SUGGESTED COURSE SEQUENCE FOR HOME ECONOMICS MAJOR WITH SPECIAL SECONDARY CREDENTIAL

FRESHMAN YEAR			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
†Engl. 150—Written Expr. <i>or</i>		†Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A.....	3	Lang. Arts 150B.....	3
Biol. Sci. 153—Prin. of Biology <i>or</i>		Biol. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151.....	3	Phys. Sci. 151.....	3
*H.Ec. 101—Fundamental Prin. of		H.Ec. 102—Textiles, Wardrobe.....	4
Clothing Construction.....	3	Art 150—Art, Music, Dance.....	3
H.Ec. 130—Marriage & Family.....	3	Elective.....	2
Elective.....	3	Phys. Educ. elective.....	1
P.E. 150.....	1		

SOPHOMORE YEAR			
Biol. Sci. 154 <i>or</i>		Hist. 250—U. S. History.....	3
Phys. Sci. 152.....	3	Phil. 150—Phil. Ideas.....	3
Govt. 150—Govt. & Amer. Soc.....	3	Gen. Educ. Soc. Sci. elective.....	3
Engl. 250—Understanding Lit.....	3	H.Ec. 210—Food Prep. & Nutr.....	4
Psych. 150—Human Behavior.....	3	H.Ec. 220—The Child.....	2
Nursing 101—Home Nursing.....	2	Elective.....	1
Elective.....	2		

JUNIOR YEAR			
H.Ec. 341—Org. & Managing the		Gen. Educ. elective.....	3
Home.....	3	H.Ec. 440—Family Finance.....	3
H.Ec. 310—Meal Mgmt.....	4	H.Ec. 461—Home Furnish. Lab.....	3
H.Ec. 360—Color, Design, H.F.....	3	Educ. 471—Sec. Educ.....	5
Educ. 300—Intro. to Cred. Prog. N.Cr.		H&S 350—Personal Health.....	2
Educ. 413—Psych. & Soc.....	5		

* Students with comparable experience may be excused from H. Econ. 101 by satisfactory achievement on a placement test.

† See "Note" on page 61.

SENIOR YEAR			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Gen. Educ. elective	3	Educ. 443YZ—Directed Teaching..	6
H.Ec. 400—Tailoring	2	Educ. 444YZ—Probs. in Sec.	
H.Ec. 320—Child Care Lab.	2	Tchnng.	3
H.Ec. 349—Home Living	2	Educ. 480—Fund. Counsel & Guid.	2
Educ. 493—Methods	2	Elective	4
Educ. 490—Audio Visual	2		
Elective	2		

SUGGESTED COURSE SEQUENCE FOR HOME ECONOMICS MAJOR WITH GENERAL SECONDARY CREDENTIAL

FRESHMAN YEAR AND SOPHOMORE YEAR SAME AS
SPECIAL SECONDARY CREDENTIAL

JUNIOR YEAR			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
H.Ec. 341—Org. & Managing the Home	3	Gen. Educ. elective	3
H.Ec. 310—Meal Mgmt.	4	H.Ec. 440—Family Finance	3
H.Ec. 360—Color, Design, H.F.	3	H.Ec. 461—Home Furnish. Lab.	3
Educ. 300—Intro. to Cred. Prog.	N.Cr.	Educ. 413—Psych. & Soc.	5
Minor	5	H&S 350—Personal Health	2

SENIOR YEAR			
Gen. Educ. elective	3	H.Ec. 349—Home Living	2
H.Ec. 400—Tailoring	2	Educ. 493—Methods (Major)	2
H.Ec. 320—Child Care Lab.	2	Minor	6
Educ. 471—Sec. Educ.	5	Electives	5
Minor	3		

FIFTH YEAR			
Educ. 493—Methods (Minor)	2	Educ. 444Z—Prob. in Sec. Tchnng.	2
Educ. 444Y—Prob. in Sec. Tchnng.	1	Educ. 442Z—Directed Teaching	3
Educ. 442Y—Directed Teaching	3	Educ. 480—Fund. Counsel & Guid.	2
Educ. 490—Audio Visual	2	Minor	3
Minor	3	Electives	5
Elective	4		

Home Economics in Business Major

Designed for students who desire a career in Home Economics in Business in addition to preparation for family living.

Lower Division

*H. Ec. 101—Fundamental Principles of Clothing Construction	3 units
H. Ec. 102—Textiles, Wardrobe Planning and Construction	4 units
H. Ec. 130—Marriage and Family Relationships	3 units
H. Ec. 210—Food Preparation and Nutrition	4 units
H. Ec. 220—The Child	2 units
Chemistry 100A—Fundamentals of Chemistry	3 units

Upper Division

H. Ec. 310—Meal Management and Hospitality	4 units
H. Ec. 341—Organizing and Managing the Home	3 units
H. Ec. 349—Home Living Experience	2 units

* Students with comparable experience may be excused from H. Econ. 101 by satisfactory achievement on placement test.

H. Ec. 360—Color and Design in Home and Furnishings	3 units
H. Ec. 430—Household Equipment	3 units
H. Ec. 440—Family Finance	3 units
H. Ec. 470—Demonstration Techniques	3 units
	40 units

Recommended Electives

- Art 103—Art Structure (2)
- Business 341—Salesmanship (3)
- English 406—Communication of Ideas (3)
- Journalism 445—Feature Article Writing (3)
- Business 445—Public Relations Methods (3)
- Business 340—Principles of Advertising (3)
- Education 490—Audio-Visual Instruction (2)
- English 306—Technical Report Writing (3)
- Business 102A—Typing I (2)
- Business 301—Business Communications (3)

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR HOME ECONOMICS IN BUSINESS MAJOR

FRESHMAN YEAR

<i>First Semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
†Engl. 150—Written Expr. <i>or</i>		†Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3
Biol. Sci. 153—Prin. of Biology <i>or</i>		Biol. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151	3	Phys. Sci. 151	3
*H.Ec. 101—Fundamental Prin. of		H.Ec. 102—Textiles, Wardrobe	4
Clothing Construction	3	Art 150—Art, Music, Dance	3
H.Ec. 130—Marriage and Family ..	3	Elective	2
Elective	3	Phys. Educ. elective	1
P.E. 150	1		

SOPHOMORE YEAR

Biol. Sci. 154 <i>or</i>		Hist. 250—U. S. History	3
Phys. Sci. 152	3	Phil. 150—Phil. Ideas	3
Govt. 150—Govt. & Amer. Soc.	3	Gen. Educ. Soc. Sci. elective	3
Engl. 250—Understanding Lit.	3	H.Ec. 210—Food Prep. & Nutr.	4
Psych. 150—Human Behavior	3	Chem. 100A—Fund. of Chemistry ..	3
H.Ec. 220—The Child	2		
Elective	2		

JUNIOR YEAR

Gen. Educ. elective	3	H.Ec. 440—Family Finance	3
H.Ec. 310—Meal Mgmt.	4	H.Ec. 360—Color, Design, H.F.	3
H.Ec. 430—Hsehold. Equip.	3	H.Ec. electives	4-6
H.Ec. 341—Org. & Managing the		Electives	3-5
Home	3		
H&S 350—Personal Health	2		

SENIOR YEAR

Gen. Educ. elective	3	H.Ec. 470—Demonstrn. Techn.	3
H.Ec. 349—Home Living	2	H.Ec. recommended electives	2-5
H.Ec. recommended electives	2-4	Electives	7-10
Electives	6-8		

* Students with comparable experience may be excused from H. Ec. 101 by satisfactory achievement on a placement test.

† See "Note" on page 61.

General Secondary Teaching Minor**Lower Division**

*Home Economics 101—Fundamental Principles of Clothing Construction	3 units
Home Economics 102—Textile, Wardrobe Planning and Construction	4 units
Home Economics 130—Marriage and Family Relationships	3 units
Home Economics 210—Food Preparation and Nutrition	4 units
Home Economics 220—The Child	2 units

Upper Division

Home Economics 310—Meal Management and Hospitality	4 units
Home Economics 341—Organizing and Managing the Home	3 units
Home Economics 360—Color and Design in Home and Furnishings	3 units

 26 units
COURSES OF INSTRUCTION***101 Fundamental Principles of Clothing Construction**

(3) Fall, Spring

Basic principles and techniques of garment construction; suitable dress; use and care of tools, materials and equipment. Two 3-hour laboratories combined with lecture.

102 Textiles, Wardrobe Planning, and Construction (4) Fall, Spring

Prerequisite: Home Economics 101, or pretest. Principles and skills in garment construction. Selection, construction, care and repair of personal and family wardrobe. Consideration of economic, psychological and time factors; related textile study. One hour lecture; two 3-hour laboratories combined with lecture.

130 Marriage and Family Relationships (3) Fall, Spring

Interpersonal relationships of family members and the resulting effects on the individual, family group, and the community. Problems involved in courtship, marriage, and establishing the home.

210 Food Preparation and Nutrition (4) Fall, Spring

Nutrition fundamentals, manipulative techniques and scientific principles as bases for meal planning and preparation. One hour lecture; two 3-hour laboratories combined with lecture.

220 The Child (2) Fall, Spring

Care and guidance of the child from infancy to preadolescence.

310 Meal Management and Hospitality (4) Fall, Spring

Prerequisite: H.Ec. 210. Meal planning preparation with emphasis on nutrition, economics, aesthetics, and hospitality. One hour lecture; two 3-hour laboratories.

311 Advanced Food Preparation (2)

Prerequisites: H.Ec. 210 and 310. Recipe evaluation, advanced work in food preparation; history and cookery of foreign foods. Two 2-hour laboratories combined with lecture.

* Students with comparable experience may be excused from H.Ec. 101 by satisfactory achievement on a placement test.

320 Child Care Laboratory (2) Fall, Spring

Prerequisite: H.Ec. 220. Observation and participation in nursery schools or child care centers, including evaluation and parent contact. One hour lecture; three-hour laboratory. Limited to home economics majors. Chest X-ray required.

341 Organizing and Managing the Home (3) Fall, Spring

Principles of effective home management; efficient use of time, energy, money, and materials.

349 Home Living Experience (2) Fall, Spring

Prerequisites: H.Ec. 310, 341, 440. Group living experiences under supervision in home management house. Practical application of basic principles of homemaking. Four-six weeks residence. Fee to cover living cost.

360 Color and Design in Home and Furnishings (3) Fall, Spring

Application of color and design principles in the home; selection of furniture, textiles, and accessories related to family needs, income, and interest.

398 Work-Study Assignments and Reports (1-2)

Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

400 Tailoring (2) Fall, Spring

Prerequisite: H.Ec. 102. Principles, processes and skills used in the construction of suits and coats. Two 2-hour laboratories combined with lecture.

401 Dress Design (3)

Prerequisites: H.Ec. 101 and 102. Fundamentals of pattern drafting, dress design, and draping. Two 3-hour laboratories combined with lecture.

405 Textile Study (2)

Recognition and analysis of fibers, fabrics and finishes. Consideration of factors which determine durability, use, care, and price of fabrics used in the home. Two 2-hour laboratories combined with lecture.

410 Experimental Cookery (3)

Prerequisites: H.Ec. 210, 310. Application of scientific principles to experimental methods in food preparation and recipe analysis. Two 3-hour laboratories.

430 Household Equipment (3) Fall

Fundamental considerations governing selection, operation, care, and testing of equipment used in the home. Two 3-hour laboratories combined with lecture.

440 Family Finance (3) Fall, Spring

Economic role of the family; expenditures, savings and investments; evaluation of marketed goods and services; sources of consumer aids and protections.

460 Housing (3)

Study of functional design in dwellings suited to stages of family life cycle; trends, developments and research in housing.

461 Home Furnishing Laboratory (3) Fall, Spring

Selection, use, and care of materials and tools needed for constructing or finishing items for the home; principles of construction of draperies and slipcovers; wood finishing and upholstery techniques. Two 3-hour laboratories combined with lecture. Materials furnished by students.

470 Demonstration Techniques (3) Spring

Practice in techniques involved in promotional and educational demonstrations. Field experience through co-operation with local business and utility companies. Two 3-hour laboratories combined with lecture.

499 Special Problems in Home Economics (1-3) Fall, Spring

Approval of the staff is required. Independent study of home economics problems designed to meet the individual needs and interests of the major student with upper division standing.

INDUSTRIAL ARTS

(In the Division of Technical Sciences)

STAFF: Dobson (Department Head), Ehrenborg, Gummere, Haithwaite, Hoffman, La Monica, Mays, Sweetnam, Teague, Thomas, Zahrt, Nihart (Prof. Emeritus).
Part-time: Baer, Fausel, Funk, Goldsmith, Knudson, Kopp, Roberts, Todd, Wilbert.

BACHELOR'S DEGREE CURRICULA

Major in Industrial Arts

Students desiring to receive the A.B. degree with a major in industrial arts must plan this major with the advice and counsel of a department adviser.

Special Secondary Limited Credential in Industrial Arts Education

Students should consult the Industrial Arts Department head for requirements for the Special Secondary Limited Credential in Industrial Arts Education.

Special Secondary Teaching Major in Industrial Arts

See also pages 152-153 for professional education requirements.

Designed to prepare teachers for elementary and secondary school positions.

Ordinarily industrial arts is offered as a teaching major. Unless authorized by the department, the student must qualify for a special secondary credential in industrial arts as a part of major department requirement.

The following sequence of courses is listed as a guideline to students wishing to secure this credential.

Lower Division (18 units required)

IA 100—Basic Automotive Mechanics	3 units
IA 110—Basic Drafting	3 units
IA 120—Basic Electronics	3 units
IA 130—Basic Graphic Arts	3 units
IA 160—Basic Metalwork	3 units
IA 170—Basic Woodwork	3 units

Upper Division (28 units required)

IA 300—Industrial Arts Curriculum	3 units
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Select two of the following areas of concentration based on required basic courses

IA 401ABC—Automotive Mechanics (3-3-3)	18 units
IA 411ABC—Drafting (3-3-3)	
IA 421ABC—Electronics (3-3-3)	
IA 431ABC—Graphic Arts (3-3-3)	
IA 441ABC—Industrial Crafts (Handicrafts) (3-3-3)	
IA 461ABC—Metalwork (3-3-3)	
IA 471ABC—Woodwork (3-3-3)	

- IA 491—Color Photography (3)
 IA 492—Functional Photography (3)
 IA 493—Advanced Photography (3)

Four units from the following courses selected with the consent of an adviser 4 units

- IA 390—Basic Photography (3)
 IA 480—Comprehensive General Shop (3)
 IA 481—Shop Maintenance (1)
 IA 482—Shop Drawing (2)
 IA 483—Construction of Teaching Aids (3)
 IA 484—Industrial Arts Design (2)

Economics 302—Labor Economics 3 units

46 units

General Secondary Teaching Major

The industrial arts requirements for the general secondary credential in industrial arts are the same as those for the special secondary credential. See also pages 151-152 for professional education requirements. A teaching minor in a different teaching field and a graduate year including additional professional education courses are required for the general secondary credential.

SUGGESTED COURSE SEQUENCE FOR INDUSTRIAL ARTS MAJOR WITH SPECIAL SECONDARY CREDENTIAL

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
I. A. 110—Basic Draft. I	3	I. A. 170—Basic Woodwrk. I	3
*Engl. 150—Written Expr. <i>or</i>		*Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3
Biol. Sci. 153—Prin. of Biology <i>or</i>		Biol. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151	3	Phys. Sci. 151	3
Govt. 150—Govt. & Amer. Soc.	3	Art 150—Art, Music, Dance	3
P.E. 150	1	Phys. Educ. elective	1
Elective	3	Elective	3

SOPHOMORE YEAR

I. A. 160—Basic Metalwork I	3	I. A. 120—Basic Electronics	3
I. A. 101—Basic Automotive		I. A. 130—Basic Graphic Arts	3
Mech. I	3	Psych. 150—Human Behavior	3
Phil. 150—Phil. Ideas	3	Hist. 250—U. S. History	3
Biol. Sci. 154—Prin. of Biology <i>or</i>		Gen. Educ. Soc. Sci. elective	3
Phys. Sci. 152	3		
Engl. 250—Understanding Lit.	3		

JUNIOR YEAR

First Ind. Arts. Concentration	3	First Ind. Arts. concentration	3
H&S 350—Personal Health	2	Second Ind. Arts. concentration	3
Gen. Educ. elective	3	Educ. 471—Sec. Educ.	5
Educ. 300—Intro. Cred. Prog	N.Cr.	I. A. 300—Ind. Arts. Curric.	3
Econ. 302—Labor Econ.	3	Electives	2
Educ. 413—Psych. & Soc.	5		

* See "Note" on page 61.

SENIOR YEAR			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
First Ind. Arts concentration	3	Second Ind. Arts concentration	3
Second Ind. Arts concentration	3	Gen. Educ. elective	3
Educ. 490—Audio-Visual	2	Educ. 443YZ—Directed Teaching	6
Educ. 493IA—Methods	2	Educ. 444YZ—Probl. in Sec. Tchng.	3
Electives	5		

SUGGESTED COURSE SEQUENCE FOR INDUSTRIAL ARTS MAJOR WITH GENERAL SECONDARY CREDENTIAL

FRESHMAN YEAR AND SOPHOMORE YEAR SAME AS SPECIAL SECONDARY CREDENTIAL

JUNIOR YEAR			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
First Ind. Arts concentration	3	First Ind. Arts concentration	3
H&S 350—Personal Health	2	Second Ind. Arts concentration	3
Gen. Educ. elective	3	Educ. 413—Psych. and Soc.	5
Educ. 300—Intro. Cred. Prog.	N.Cr.	Ind. Arts. 300—Ind. Arts. Curric.	3
Minor	5	Minor	2
Econ. 302—Labor Econ.	3		

SENIOR YEAR			
First Ind. Arts concentration	3	Second Ind. Arts concentration	3
Second Ind. Arts concentration	3	Gen. Educ. elective	3
Educ. 471—Sec. Educ.	5	Educ. 493IA—Methods (Major) (Minor)	4
Minor	4	Minor	5

FIFTH YEAR			
Minor	5	Educ. 442Z—Directed Teaching	3
Educ. 442Y—Directed Teaching	3	Educ. 444Z—Probl. in Sec. Tchng.	2
Educ. 444Y—Probl. in Sec. Tchng.	1	Educ. 480—Fund. Counsel. & Guid.	2
Educ. 490—Audio-Visual	2	Electives	8
Elective	2		

General Secondary Teaching Minor

IA 300—Industrial Arts Curriculum	3 units
One Area of Concentration	12 units
Other Industrial Arts courses to be selected with the approval of the department head	7 units
	22 units

(The 22 units in the minor must include a college level drafting course.)

MASTER OF ARTS DEGREE

Industrial Arts majors who wish to take a master's degree in Industrial Education should contact the Department for the degree requirements.

COURSES OF INSTRUCTION

100 Basic Automotive Mechanics I (3)

Designed to meet the general industrial education needs of the Industrial Arts Major. Emphasis on maintenance procedures, tools, equipment, physical principles, nomenclature, and consumer data.

110 Basic Drafting I (3)

Drafting techniques used in modern manufacturing and production; orthographic projection; auxiliaries; dimensioning; isometrics; obliques; fasteners; welding; forging and casting drawings; design problems.

120 Basic Electronics I (3)

General industrial education course covering historical, present-day application, importance of electronics in our society. Development of basic electronic skills through shop-laboratory experiences.

130 Basic Graphic Arts I (3)

General industrial education course emphasizing letterpress and lithographic printing processes, photography applied to graphic reproduction, and bookbinding procedures; historical and present-day importance of visual communications in our society; develops basic graphic arts skills through laboratory-shop experiences.

160 Basic Metalwork I (3)

General industrial education course covering materials and production processes used in metalworking industry; development of basic metalworking skills through laboratory-shop experiences in art metal, forging, founding, machining, sheet metal, and welding.

170 Basic Woodwork I (3)

Understanding of wood and related materials; the importance of these materials in the economy. Taught in a creative problem-solving environment; requires the manipulation of wood and the development of basic skills in use of woodworking hand tools and machines.

300 Industrial Arts Curriculum (3)

Philosophy and development of industrial arts education; its present place and function in the total program of elementary and secondary education. Development and use of instructional materials for different industrial arts areas; preparation and use of tests, instruction sheets, courses of instruction, and shop planning. This course is a prerequisite to Education 493IA.

340 Industrial Arts for the Elementary School (2)

Development of skills with hand tools used in construction. Experience in making materials used in dramatic play to enrich the social studies. (Same as Art 340.)

390 Basic Photography (3)

Principles of photography. Camera and darkroom techniques; black and white photography; some color photography.

398 Work-Study Assignments and Reports (1-2)

Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

401A-B-C Automotive Mechanics II, III, IV (3-3-3)

Prerequisite: Industrial Arts 100. A sequence of three courses primarily designed to prepare students as industrial arts automotive mechanics teachers. Competencies developed in engine rebuilding, chassis repair, and tune up procedures; specific methods and techniques of automotive instruction stressed.

411A-B-C Drafting II, III, IV (3-3-3)

Prerequisite: Industrial Arts 110. Sequence of three courses designed to prepare students as industrial arts drafting teachers. Shape and size description; use of drafting instruments; lettering; sketching, fasteners; cams and gears; sheetmetal, architectural, aircraft, electrical, piping, welding, and structural drafting; tool design; reproduction processes.

421A-B-C Electronics II, III, IV (3-3-3)

Prerequisite: Basic Electronics, college algebra is recommended. A sequence of three courses primarily designed to prepare students as industrial arts electronics teachers. Includes electronic circuit concepts, radio, sound, communications, television. Lecture, laboratory experiments, construction and repair.

431A-B-C Graphic Arts II, III, IV (3-3-3)

Prerequisite: Industrial Arts 130. Sequence of three courses primarily designed to prepare students for teaching graphic arts in industrial arts programs. Design and layout, composition, presswork, binding, photography, silk screen work, block printing, rubber plates, gold stamping, offset lithography, and other duplicating processes.

432A Typographic Layout and Design I (3)

Prerequisite: Course in typography or consent of instructor. Basic principles of design applied to products of the printer. Drawing thumbnail sketches and rough and finished layouts in solution of copy-fitting problems, selection of type and paper, and selection of various processes for reproduction of finished project. (Formerly Business 377.)

432B Typographic Layout and Design II (3)

Prerequisite: Industrial Arts 432A. Continuation of 432A with stress upon the layout and design of complete projects. Use of working dummies to illustrate the problems of printing production. Basic elements of book design. (Formerly Business 378.)

433 Printing Estimating (3)

Prerequisites: Industrial Arts 130 and 431A-B-C or consent of instructor. Elements of estimating all classes of printing involving type composition, presswork, binding, paper, photoengravings; cost-finding problems. (Formerly Business 379.)

441A-B-C Industrial Crafts (Handicrafts) II, III, IV (3-3-3)

Prerequisite: A course in woodworking and metalworking or consent of the instructor. Advanced course in handicrafts. Industrial operations

and processes used in novelty wood, metal, plastics, leather, jewelry, lapidary, sportscraft, and related instructional areas.

461A-B-C Metalwork II, III, IV (3-3-3)

Prerequisite: Industrial Arts 160. Sequence of three courses primarily designed to prepare students as general metalworking teachers. Design and construction of projects in following areas: Art metal, bench metal, sheet metal, forging and heat treating, machine shop, patternmaking and foundry, and welding. Instruction in proper use and care of hand tools, power tools, machines, materials, safety, shop organization and shop management.

471A-B-C Woodwork II, III, IV (3-3-3)

Prerequisite: Industrial Arts 170. Sequence of three courses primarily designed to prepare students as general woodworking teachers. Planning; hand and power tools; woodworking machines; model making; pattern making; carpentry; cabinet and furniture making; finishing.

480 Comprehensive General Shop (3)

Prerequisite: Completion of required basic courses for industrial arts majors. Philosophy, development, and trends of the general shop. Organization and operation of a multiple activity program. Design and construction of projects and aids for the areas of the comprehensive general shop. Shop organization and management procedures.

481 Shop Maintenance (1)

Study of various maintenance problems found in industrial arts shops in public schools.

482 Shop Drawing (2)

Prerequisite: Industrial Arts 110. Additional information and practice in the preparation of working drawings for all of the industrial arts areas. Credit cannot be given for Industrial Arts 411A-B-C and 482.

483 Construction of Teaching Aids (3)

Construction of teaching aids for shop class use, such as cutaway models and mockups, assignment boards, checking devices for course coverage, blownup models, electrical identification panels, procedure boards, and material specimens.

484 Industrial Design (2)

Study of that phase of the industrial process known as Design: the elements and principles of creative problem-solving and aesthetics. Application through two- and three-dimensional exploratory exercises in color, texture, shape, form, structure, and space and through simple industrial design problems as they relate to the materials and processes of industry. Understanding the application of industrial design to industrial arts; lecture, laboratory, and field trips.

491 Color Photography (3)

Prerequisite: Industrial Arts 390 or equivalent. Principles of color photography. Exposure and processing techniques as applied to current films. Survey of color print processes.

492 Functional Photography (3)

Prerequisite: Industrial Arts 390 or the equivalent. Principles and practices of photography in education, industry, business and research including high-speed, timelapse, invisible light and polarized light photography; data recording and copying; photomicroscopy, macrophotography, and astrophotography; and template making.

493 Advanced Photography (3)

Prerequisite: Industrial Arts 390 or the equivalent. Recommended prerequisites: Industrial Arts 491 and 492. Advanced photographic techniques for the photography teacher; studio, pictorial and press photography; photomechanical reproduction; advanced processing; techniques, organization and problems in teaching photography.

499 Special Problems in Industrial Arts (1-3)

Approval of the department head. Independent study of industrial arts problems designed to provide upper division students an opportunity for additional experience of an advanced nature in an area of special interest.

GRADUATE COURSES**505 Supervision and Organization of Industrial Arts Programs (3)**

Responsibilities of the supervisor for organizing industrial arts programs on various levels and for the improvement of instruction in the field.

506 Teaching Problems in Industrial Arts (3)

Study and investigation of teaching problems in industrial arts. Provision for individual and group studies of special problems.

583 Development, Use, and Evaluation of Instructional Aids in Industrial Arts (3)

Advanced course in development, use, and evaluation of instructional aids. Emphasis on three-dimensional teaching aids, charts, slides, and displays.

584 Seminar in Advanced Industrial Design (3)

Prerequisite: Industrial Arts 484. Industrial design as applied to industrial objects of everyday use in materials and processes common to industry. Students must show graduate competence in design and research.

JOURNALISM

(In the Division of Language Arts)

STAFF: Borders (Department Head), Blackmon, Haithwaite, Lloyd, Scott.

BACHELOR'S DEGREE CURRICULUM

Major in Journalism

Students who complete the professional major will find careers in: (1) the editorial and advertising departments of newspapers, magazines, and industrial organs, (2) public relations with business firms, government, colleges, and city school systems, (3) the editorial and business staffs of radio and television news bureaus, (4) the fields of teaching journalism and publication advisement in schools and colleges.

Lower Division

Journalism 100—Modern Journalism and Mass Media of Communication	3 units
Journalism 101—News Writing	3 units
Journalism 102—Reporting	3 units

Upper Division

Journalism 338—Typography and Mechanics of Newspapers	2 units
At least <i>one</i> from the following	3 units
*Journalism 430YZ—News Editing (3-3)	
At least <i>one</i> course from the following	3 units
*Journalism 440—History and Philosophy of the Mass Media (3)	
Government 414—Public Opinion and Lobbies (3)	
Government 470—Public Relations in Government (3)	
At least <i>one</i> course from the following	3 units
*Journalism 441—Newspaper and Magazine Analysis (3)	
Business 304—Principles of Marketing (3)	
Economics 390—Current Economic Problems (3)	
Economics 412—Development of Economic Thought (3)	
At least <i>one</i> course from the following	3 units
*Journalism 470—Newspaper Management (3)	
Journalism 471—Newspaper Advertising (3)	
Business 340—Principles of Advertising (3)	
Business 440—Advanced Advertising (3)	
Business 445—Public Relations Methods for Business (3)	
Home Economics 130—Marriage and Family Relationships (3)	
Home Economics 440—Family Finance (3)	
At least <i>one</i> course from the following	2 units
*Journalism 391-393-394-395—Special Projects in Journalism (2)	
Journalism 398—Work-Study Assignments and Reports (2)	
Journalism 490—The Press and World Affairs	2 units
Journalism 491—Law of the Mass Media of Communication	2 units
American Studies 402—Ideas in America	3 units

32 units

* Normally these courses are required for the major unless similar courses from other colleges have been completed in lower division. The alternate courses listed above may not be substituted by the student without specific advance permission.

* Teaching Major in Journalism

No teaching major is offered in the field of journalism exclusively. A student who is interested in a composite-field teaching major which includes journalism should refer to pages 259-260, where the language arts major is outlined.

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR JOURNALISM MAJOR

FRESHMAN YEAR			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
*Engl. 150—Written Expr. <i>or</i>		*Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3
Biol. Sci. 153—Prin. of Biology <i>or</i>		Biol. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151	3	Phys. Sci. 151	3
Geog. 150—Human Geog.	3	Phil. 150—Phil. Ideas	3
Govt. 150—Govt. & Amer. Soc.	3	Art 150—Art, Music, Dance.	3
Psych. 150—Human Behavior.	3	Jour. 100—Modern Journalism &	
P.E. 150	1	Mass Media of Commun.	3
		Physical Educ. elective.	1
SOPHOMORE YEAR			
Phil. 250—Logic	3	Econ. 150—Econ. for the Citizen	3
Engl. 250—Underst. Lit.	3	Hist. 250—U. S. History	3
Biol. Sci. 154—Prin. of Biology <i>or</i>		Jour. 102—Reporting	3
Phys. Sci. 152	3	Elective	6
Jour. 101—News Writing	3		
Elective	3		
JUNIOR YEAR			
Bus. 340—Prin. of Advertising	3	Jour. 441—Newsp. & Mag.	
Govt. 303—St. & Local Govt.	3	Analysis	3
Jour. 430Y—News Editing	3	Govt. 304—Municipal Govt.	3
Jour. 440—Hist. & Phil. of		Jour. 338—Typography	2
Mass Media	3	Jour. 339—Photo Journalism	3
Jour. 391, 393, 394, or 395	1-2	Jour. 430Z—News Editing	3
H. & S. 350—Personal Health	2	Jour. 391, 393, 394, or 395	1-2
SENIOR YEAR			
Am. Studies 402—Ideas in Amer.	3	Bus. 440—Adv. Advertising <i>or</i>	
Engl. 481—Lit. & Fine Arts, A.D.	3	Bus. 445—Pub. Rel. Methods	3
Jour. 470—Newsp. Mgmt.	3	Jour. 471—Newspaper Advertising	3
Jour. 491—Law of Mass Media	2	Jour. 490—Press & Wld. Affairs	2
Jour. 398—Work-Study	1-2	Jour. 445—Feature Art. Writ.	3
Elective	3	Jour. 398—Work-Study	1-2
		Elective	3-5

(All courses listed above are not required nor is the sequence important in all cases. Each student should work out his own program with his adviser. It is the student's responsibility to see that all requirements for graduation are met.)

* See "Note" on page 61.

MASTER OF ARTS DEGREE

See "Language Arts," page 261.

COURSES OF INSTRUCTION *

Ability to type or concurrent enrollment in typing is a prerequisite for all students majoring in journalism.

100 Modern Journalism and Mass Media of Communication (3)

Survey of mass media of communication with special emphasis on newspapers, magazines, radio, and television. Study of news functions, opinion-forming and interpretive materials, and feature values.

101 News Writing (3)

Introduction to news writing and reporting. News sources, collection of news, acceptable forms for news stories, and newspaper style.

102 Reporting (3)

Continuation of Journalism 101. Specialized reporting, feature writing, and staff work on the newspaper. Provides base for advanced journalism courses.

338 Typography and Mechanics of Newspapers (2) Spring

Study of techniques of publishing, including typography, typesetting, photoengraving, printing methods and machines. Background for understanding and supervising printing problems.

339 Photo-Journalism (3) Spring

Techniques and practice of producing a photographic essay. Basic photography recommended but not required. Lecture two hours; laboratory two hours.

391-395 Special Projects in Journalism

391WXYZ *College Times* (2)

394WXYZ *Night Times* (1)

393WXYZ *Pitchfork* (1)

395WXYZ *News Bureau* (2)

Prerequisite: Consent of instructor. Recommended for members of *College Times* staff, *Pitchfork* staff, *Night Times* staff, and *News Bureau* staff. One hour class plus three hours additional supervised activity weekly. May be taken in any combination and may be repeated for a total of eight units.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

430Y-Z News Editing (3-3) Y—Fall; Z—Spring

Prerequisites: Two semesters of collecting and writing news or equivalent. Techniques of copyreading and headline writing, theories of news selection and makeup, examination of newspaper editorial practice.

440 History and Philosophy of the Mass Media (3) Fall

Study of development of journalism, particularly in the United States, with an introduction to important papers and personalities. Develop-

ment of freedom of the press with consideration of its responsibilities under law.

441 Newspaper and Magazine Analysis (3) Fall

Examination of editorial policies of representative daily, weekly, and monthly publications. Critical study of news and feature coverage. Influence of the media on public opinion and popular taste. Bases for judgment of reliability, responsibility, bias.

445 Feature Article Writing (3) Spring

Open to all upper division students and to sophomores who have completed two semesters of collecting and writing of news, and one semester of copyreading and headline writing, or their equivalents. Deals principally with writing of articles for Sunday feature sections of newspapers or trade or regional magazines.

460 Industrial Magazine Publishing (3) Fall

Editing and business management of the house organ and industrial magazine, stressing format, copy, illustration, and promotion. For the beginner or, as a refresher course, for the working editor.

464 High School Journalism (2) Spring

Theory and technique of advising school newspaper and yearbook staffs. Relation of staff assignments to classroom instruction. Designed for credential candidates in education, English, and language arts who may supervise school publications. Practice in rating the quality of secondary yearbooks and newspapers.

470 Newspaper Management (3) Fall

Analysis of the economy, organization, and business operation of daily and weekly newspapers. Circulation, advertising, promotion, production, and plant design problems. Practice in simple cost accounting and bookkeeping procedures in newspaper business management.

471 Newspaper Advertising (3) Spring

Principles of advertising with emphasis on the newspaper as an advertising medium. Instruction and practice in preparing pictures, layouts, and copy for newspaper use, including attention to mat services and available syndicated materials.

490 The Press and World Affairs (2) Spring

Comparative world journalism with an examination of sources of news from various capitals. Analysis of propaganda. Comparative study of the four streams of news: local, state, national, and international.

491 Law of the Mass Media of Communication (2) Fall

Chiefly a study of the law of libel. Consideration of the right of privacy, contempt of court, freedom of the press, copyright, statutory limitations, postal regulations and the right to print news of public affairs. Privileged matter under law.

492 Radio and Television Continuity Writing (3) Fall

Analysis and preparation of local news and commercials, musical introductions, and special news features for radio and television.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

GRADUATE COURSES**520 Seminar in Journalism (3)**

Combines intensive training in advanced journalistic writing at the graduate level and study of outstanding contemporary publications and the contemporary publication field. Analysis of leading contemporary works.

LANGUAGE ARTS

(In the Division of Language Arts)

STAFF: Marcus (Adviser). Faculty from co-operating disciplines within the Language Arts Division.

BACHELOR'S DEGREE CURRICULUM

Major in Language Arts

The language arts program is designed to prepare secondary school teachers who have a special interest in communication skills. Students in this program take a common core of upper division courses emphasizing an awareness and understanding of language and thought patterns in reading, writing, speaking, and listening. Requirements in language, speech, and mass media analysis courses are supplemented by electives in literature.

Language arts is offered as a teaching major. Students wishing to qualify for a bachelor's degree in this field should follow the requirements listed below for the general secondary teaching major.

General Secondary Teaching Major

See also pages 151-152 for professional education requirements. A teaching minor in a different teaching field is also required for the general secondary credential. (Language arts majors may not elect an English or speech minor since the program is a composite one including significant elements from both English and speech major programs. Language arts majors are encouraged to supplement this major with a minor in social sciences.) The student undertaking the language arts major should ask for an adviser at the office of the Division of Language Arts before taking courses in the major.

Lower Division

No requirements beyond General Education courses: Language Arts 150AB * and English 250.

Upper Division

English 405—Modern English Grammar.....	3 units
English 406—Communication of Ideas.....	3 units
Journalism 441—Newspaper and Magazine Analysis.....	3 units
Language Arts 464—Contemporary Dramatic Arts.....	3 units
Speech 400—Group Discussion	3 units
Speech 411—Persuasive Speaking	3 units
Speech 420—Oral Interpretation	3 units
Speech 468—Speech Analysis and Evaluation.....	3 units
American Studies 402—Ideas in America.....	3 units
English 484—Contemporary World Literature.....	3 units

* See note under "TV. Communication," p. 61.

Select six units from either of the following options..... 6 units

Option 1—American Literature

- a. Three units from English 470, English 473, English 474
- b. Three units from English 471, English 472, English 475

Option 2—British Literature

- a. Three units from English 466, English 467, English 468
- b. English 469

Select *one* course from the following..... 2-3 units

- English 417—Interpreting Shakespeare (3)
- English 425—Modern Continental Drama (3)
- English 480—Literature and the Fine Arts, B.C. (3)
- English 481—Literature and the Fine Arts, A.D. (3)
- English 485—Literature and Human Values (3)
- Journalism 101—Newswriting (3)
- Journalism 464—High School Journalism (2)
- Speech 397—Forensics (3)
- Speech 434—Introduction to Speech Correction (3)
- Speech 467YZ—Great Speakers of the Western Tradition (3)

Graduate (Fifth Year)

- English 432—Popular Literature 3 units
- Language Arts 410—Language and Culture 3 units

44-45 units

SUGGESTED COURSE SEQUENCE FOR LANGUAGE ARTS MAJOR WITH GENERAL SECONDARY TEACHING CREDENTIAL

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Lang. Arts 150A—Written and Oral Commun.	3	Lang. Arts 150B—Writ. & Oral Commun.	3
Biol. Sci. 153—Prin. of Biology <i>or</i> Phys. Sci. 151.....	3	Biol. Sci. 154—Prin. of Biology <i>or</i> Phys. Sci. 152.....	3
Govt. 150—Govt. & Amer. Soc.	3	Psych. 150—Human Behavior	3
Art 150—Art, Music, Dance.....	3	Gen. Educ. elective	3
P.E. 150	1	Phys. Educ. elective	1
Elective	3	Elective	3

SOPHOMORE YEAR

Engl. 250—Understanding Lit.	3	Minor	3
Hist. 250—U. S. History.....	3	Phil. 150—Phil. Ideas	3
*Anthro. 250—Cultural Anthro.	3	Gen. Educ. elective	3
Minor	6	Phys. Sci. 151—Prin. of Phys. Sci. <i>or</i> Biol. Sci. 153	3
		Elective	3

JUNIOR YEAR

Engl. 405—Modern Engl. Gram.	3	Engl. 406—Commun. of Ideas	3
Sp. 400—Group Discussion	3	Sp. 420—Oral Interpretation	3
Engl. 470—Masters Amer. Lit.	3	Engl. 471—Masters Amer. Lit.	3
Educ. 300—Intro. Cred. Prog. N. Cr.	3	Educ. 471—Sec. Educ.	5
Educ. 413—Psych. & Soc.	5	Sp. 411—Persuasive Speaking	3
H&S 350—Personal Health	2		

* Recommended.

COURSES OF INSTRUCTION**150A-B Written and Oral Communication (3-3) Fall, Spring**
(General Education)

Year course in communication skills of speaking, writing, reading, and listening; emphasis on critical thinking; application of communication skills to practical problems of human affairs.

400 Ideas in America (3) Changed to American Studies 402.**410 Language and Culture (3) Fall, Spring**

The role of language in the development of cultural patterns, including the relationships between change in language and change in culture. Analysis of language as the matrix of culture.

464Y-Z Contemporary Dramatic Arts (3-3) Fall, Spring

Comparative analysis of the dramatic media: cinema, television, and stage. Emphasis on "great films" series, assigned television viewing, locally produced plays, and reading of representative dramatic selections as a basis for extended practice in comparison and evaluation. Consideration of the media as art forms. May be repeated for credit only with consent of instructor and when content changes substantially.

GRADUATE COURSES**506 Seminar in Communication Problems (3) Fall**

Advanced study of factors influencing communication processes. Extended reading and application to problems in communication. Opportunity for individual projects.

510 Seminar in Theories of Language (3)

Studies and criticism of theories of language held in various times and cultures and of their implications for communication.

598 Graduate Independent Study

Guided reading geared to the individual student's needs.

MATHEMATICS

(In the Division of Science and Mathematics)

STAFF: Clark, C. (Department Head), Arnold, Boswell, Chamberlain, Cullen, Diamond, Eckert, Hayashi, Jaqua, Kiel, Lewis, Lyon, Overholtzer, Pitts, Vanderburg. Part-time: Adorno, Creson, Gordon, Greene, Horwitz, Kinan, Koch, Laing, Marer, Moore, Slater, Spain, Starbird, Stine, Sydnor, White, Yerman.

Mathematics is the science of size and shape and the art of concise and precise communication. As such, it is both an intensely vital and necessary subject in itself and an essential part of the curricula of science, business, and engineering.

A major in mathematics prepares the student to teach in secondary schools, work as a research assistant in industry and government, enter graduate school to prepare for positions on college staffs or for superior positions in industry and government.

Each of the three majors to be described may be obtained in four years provided adequate preparation has been secured in high school, e.g., algebra (2 years), geometry, trigonometry. If the student has not had this preparation or if his command of these subjects is weak, he may be advised to strengthen his knowledge before attempting college mathematics.

BACHELOR'S DEGREE CURRICULA

Bachelor of Arts Major in Mathematics

This is the standard bachelor of arts degree curriculum and is designed to prepare students for graduate work in mathematics.

Lower Division

Mathematics 100—Basic Mathematical Analysis	4 units
Mathematics 201—Analytic Geometry and Calculus I	4 units
Mathematics 202—Analytic Geometry and Calculus II	4 units
Mathematics 203—Analytic Geometry and Calculus III	4 units
Physics 201—General Physics I	4 units
Physics 202—General Physics II	4 units
Physics 203—General Physics III	4 units

Upper Division

Mathematics 380—Intermediate Analysis	3 units
Mathematics 401—Differential Equations	3 units
Mathematics 461—Advanced Calculus I	3 units
Mathematics 462—Advanced Calculus II	3 units
Select from the following	3 units
Mathematics 430—Introduction to Modern Geometry (3)	
Mathematics 432—Higher Geometry (3)	

Select from the following	3 units
Mathematics 340—Theory of Algebraic Equations (3)	
Mathematics 442—Linear Algebra and Matrices (3)	
Mathematics 444—Modern Algebra (3)	
Elective courses in upper division mathematics selected with the approval of an adviser.....	6 units

52 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR MATHEMATICS MAJOR (B.A. Degree)

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
*Engl. 150—Written Expr. or		*Sp. 150—Oral Expr. or	
Lang. Arts 150A	3	Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Biology	3	Math. 201—Anal. Geom. & Calc. I	4
Math. 100—Basic Math. Analysis	4	Physics 201—Gen. Physics I	4
Govt. 150—Govt. & Amer. Soc.	3	Phys. Educ. elective	1
Elective	2	Elective	3
P.E. 150	1		

SOPHOMORE YEAR

Math. 202—Anal. Geom. & Calc. II	4	Math. 203—Anal. Geom. & Calc. III	4
Physics 202—Gen. Physics II	4	Physics 203—Gen. Physics III	4
Phil. 150—Phil. Ideas	3	Art 150—Art, Music, Dance	3
Psych. 150—Human Behavior	3	Engl. 250—Understanding Lit.	3
Elective	2	Elective	2

JUNIOR YEAR

Math. 401—Diff. Equations	3	Math. 380—Int. Analysis	3
Math. 340, 442, or 444	3	Math. 430 or Math. 432	3
Hist. 250—U. S. History	3	Gen. Educ. elective	3
Gen. Educ. Soc. Sci. elective	3	H&S 350—Personal Health	2
Elective	4	Elective	4

SENIOR YEAR

Math. 461—Adv. Calculus I	3	Math 462—Adv. Calculus II	3
Upper Div. Math. elective	3	Upper Div. Math. elective	3
Gen. Educ. elective	3	Electives	9
Electives	6		

Bachelor of Science Major in Mathematics

The bachelor of science degree curriculum (132 units) is designed to prepare a student for a position in business, industry or government as well as for graduate work in mathematics.

Lower Division

Mathematics 100—Basic Mathematical Analysis	4 units
Mathematics 201—Analytic Geometry and Calculus I	4 units
Mathematics 202—Analytic Geometry and Calculus II	4 units
Mathematics 203—Analytic Geometry and Calculus III	4 units
Physics 201—General Physics I	4 units
Physics 202—General Physics II	4 units
Physics 203—General Physics III	4 units
Chemistry 101—General Chemistry	5 units
Chemistry 102—General Chemistry and Qualitative Analysis	5 units

* See "Note" on page 61.

Upper Division

Mathematics 380—Intermediate Analysis	3 units
Mathematics 401—Differential Equations	3 units
Mathematics 461—Advanced Calculus I	3 units
Mathematics 462—Advanced Calculus II	3 units
Select from the following	3 units
Mathematics 430—Introduction to Modern Geometry (3)	
Mathematics 432—Higher Geometry (3)	
Select from the following	3 units
Mathematics 340—Theory of Algebraic Equations (3)	
Mathematics 442—Linear Algebra and Matrices (3)	
Mathematics 444—Modern Algebra (3)	
Two of the following upper division mathematics courses:	6 units
Mathematics 370—Digital Computer Programming (3)	
Mathematics 403—Partial Differential Equations (3)	
Mathematics 405—Laplace Transform (3)	
Mathematics 410—Vector Analysis (3)	
Mathematics 470 or 471—Numerical Calculus (3)	
Mathematics 472—Linear Programming (3)	
Mathematics 475—Introduction to Mathematical Statistics I (3)	

62 units

**SUGGESTED FOUR-YEAR COURSE SEQUENCE
FOR MATHEMATICS MAJOR (B.S. Degree)**

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
*Engl. 150—Written Expr. or		Math. 201—Anal. Geom. and Calc. I	4
Lang. Arts 150A	3	Chem. 102—Gen. Chemistry and	
Govt. 150—Govt. and Amer. Soc.	3	Qual. Analysis	5
P.E. 150	1	Physics 201—Gen. Physics I	4
Math. 100—Basic Math. Analysis	4	*Sp. 150—Oral Expr. or	
Chem. 101—Gen. Chemistry	5	Lang. Arts 150B	3

SOPHOMORE YEAR

Math. 202—Anal. Geom. and		Math. 203—Anal. Geom. and	
Calc. II	4	Calc. III	4
Physics 202—Gen. Physics II	4	Physics 203—Gen. Physics III	4
Bio. Sci. 153—Prin. of Biology	3	Psych. 150—Human Behavior	3
Art 150—Art, Music, Dance	3	Engl. 250—Understanding Lit.	3
Phil. 150—Phil. Ideas	3	Phys. Educ. elective	1

JUNIOR YEAR

Math. 401—Diff. Equations	3	Math. 380—Int. Analysis	3
Math. 340, 442, or 444	3	Math. 430 or Math. 432	3
Hist. 250—U. S. History	3	H&S 350—Personal Health	2
Gen. Educ. Soc. Sci. elective	3	Electives	6
Electives	5	Gen. Educ. elective	3

SENIOR YEAR

Math. 461—Adv. Calculus I	3	Math. 462—Adv. Calculus II	3
Math. elective from appr. list	3	Math. elect. from appr. list	3
General Educ. elective	3	Electives	11
Electives	8		

* See "Note" on page 61.

General Secondary Teaching Major

This bachelor of arts degree curriculum is designed for students who plan to become secondary teachers. If graduate mathematics is anticipated, elective courses in upper division mathematics should include Mathematics 401. See also pages 151-152 for professional education requirements. A teaching minor in a different field is also required for a teaching credential.

Lower Division

Mathematics 100—Basic Mathematical Analysis	4 units
Mathematics 201—Analytic Geometry and Calculus I	4 units
Mathematics 202—Analytic Geometry and Calculus II	4 units
Mathematics 203—Analytic Geometry and Calculus III	4 units

Upper Division

Mathematics 320—Selected Topics in the History of Mathematics	3 units
Mathematics 380—Intermediate Analysis	3 units
Mathematics 420—Overview of Secondary Mathematics	3 units
Select from the following	3 units
Mathematics 430—Introduction to Modern Geometry (3)	
Mathematics 432—Higher Geometry (3)	
Select from the following	3 units
Mathematics 340—Theory of Algebraic Equations (3)	
Mathematics 442—Linear Algebra and Matrices (3)	
Mathematics 444—Modern Algebra (3)	
Select from the following	3 units
Mathematics 370—Digital Computer Programming (3)	
Mathematics 401—Differential Equations (3)	
Mathematics 470 or 471—Numerical Calculus (3)	
Mathematics 475—Introduction to Mathematical Statistics I (3)	
Elective courses in upper division mathematics selected with approval of adviser	6 units
	40 units

SUGGESTED COURSE SEQUENCE FOR MATHEMATICS MAJOR WITH GENERAL SECONDARY CREDENTIAL

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
*Engl. 150—Written Expr. <i>or</i>		*Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3
Bio. Sci. 153—Prin. of Biology <i>or</i>		Bio. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151	3	Phys. Sci. 151	3
Govt. 150—Govt. & Amer. Soc.	3	Art 150—Art, Music, Dance	3
P.E. 150	1	Phys. Educ. elective	1
Math. 100—Basic. Math. Anal.	4	Math. 201—Anal. Geom. & Calc. I	4
Elective	2	Elective	2

SOPHOMORE YEAR

Math. 202—Anal. Geom. & Calc. II	4	Math. 203—Anal. Geom. & Calc. III	4
Phil. 150—Phil. Ideas	3	Math. 320—Hist. of Math.	3
Bio. Sci. 154—Prin. of Biology <i>or</i>		Engl. 250—Understanding Lit.	3
Phys. Sci. 152	3	Gen. Educ. Soc. Sci. elective	3
Psych. 150—Human Behavior	3	Elective	3
Hist. 250—U. S. History	3		

* See "Note" on page 61.

JUNIOR YEAR

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Math. 340, 442, or 444.....	3	Upper Div. Math. elective.....	3
Upper Div. Math. elective.....	3	Math. 430 or Math. 432.....	3
Gen. Educ. elective.....	3	H&S 350—Personal Health.....	2
Minor.....	5	Educ. 413—Psych. & Soc.....	5
Educ. 300—Intro. Cred. Prog.....	N.Cr.	Minor.....	3

SENIOR YEAR

Math. 420—Overview Sec. Math.	3	Math. 380—Int. Analysis.....	3
Upper Div. Math. elective.....	3	Educ. 493—Methods (Major-2)	
Minor.....	3	(Minor-2).....	4
Educ. 471—Sec. Educ.....	5	Minor.....	3
		Gen. Educ. elective.....	3
		Elective.....	3

GRADUATE (FIFTH) YEAR

Minor.....	5	Minor.....	3
Educ. 442Y—Directed Teaching....	3	Educ. 442Z—Directed Teaching....	3
Educ. 444Y—Probl. in Sec. Tchng.	1	Educ. 444Z—Probl. in Sec. Tchng.	2
Educ. 490—Audio-Visual.....	2	Educ. 480—Fund. Counsel. &	
Electives.....	4	Guid.	2
		Electives.....	5

General Secondary Teaching Minor

Designed for students who plan to become secondary teachers. See also pages 151-152 for professional requirements. A teaching major in a different teaching field is also required.

Lower Division

Mathematics 100—Basic Mathematical Analysis.....	4 units
Mathematics 201—Analytic Geometry and Calculus I.....	4 units
Mathematics 202—Analytic Geometry and Calculus II.....	4 units

Upper Division

Mathematics 320—Selected Topics in the History of Mathematics.....	3 units
Mathematics 420—Overview of Secondary Mathematics.....	3 units
Select from the following.....	3-4 units
Mathematics 203—Analytic Geometry and Calculus III (4)	
Mathematics 340—Theory of Algebraic Equations (3)	
Mathematics 430—Introduction to Modern Geometry (3)	
Mathematics 432—Higher Geometry (3)	
Mathematics 442—Linear Algebra and Matrices (3)	
Mathematics 444—Modern Algebra (3)	
Mathematics 475—Introduction to Mathematical Statistics I (3)	

 21-22 units
MASTER OF ARTS DEGREE

General information regarding admission to graduate standing, advancement to candidacy, and college requirements for graduation may be found on pages 67-74 of this catalog.

OPTION 1—FOR TEACHERS

Prerequisite: The candidate's preliminary training should be substantially the equivalent of that required for the general secondary teaching major in mathematics.

Requirements:**(a) Course and Unit Requirements:**

Mathematics 461—Advanced Calculus I	3 units
Mathematics 462—Advanced Calculus II	3 units
Mathematics 550—Seminar	3 units
One of the following	3 units
Mathematics 580—Functions of Real Variables (3)	
Mathematics 582—Functions of Complex Variables (3)	
One of the following	3 units
Mathematics 540—Abstract Algebra (3)	
Mathematics 530—Topology (3)	
Elective courses outside the department of mathematics but related to the program	6 units
Elective courses in mathematics with graduate credit to total	30 units

(b) *At least 12 units of 500 series courses* must be included, of which at least 9 must be in mathematics as indicated above.

(c) All candidates must pass an *oral examination* administered by the mathematics department in the last semester of candidacy.

(d) Plan A or Plan B must be satisfactorily performed.

Plan A: The student may elect to write a *thesis* by registering for Mathematics 599. Not more than 3 units of Mathematics 599 will be granted if the thesis is acceptable. These units may be included among the 30 required for the degree.

Plan B: A comprehensive *written examination* may be chosen in lieu of a thesis. No unit credit will be given for such.

(e) No *foreign language* will be required. Undergraduate students will be advised to take at least one foreign language, and graduate students will be advised that most Ph.D. degree programs require a reading proficiency in two foreign languages.

OPTION 2—FOR INDUSTRY AND FURTHER GRADUATE PROGRAMS

Prerequisite: The candidate's preliminary training should be substantially the equivalent of that required for the Bachelor of Arts liberal arts major in mathematics.

Requirements:**(a) Course and Unit Requirements:**

Mathematics 580—Functions of Real Variables	3 units
Mathematics 582—Functions of Complex Variables	3 units
Mathematics 550—Seminar	3 units
Select from the following (if not previously taken)	6 units
Mathematics 403—Partial Differential Equations (3)	
Mathematics 405—Laplace Transform (3)	
Mathematics 410—Vector Analysis (3)	
Mathematics 470 or 471—Numerical Calculus (3)	

Elective courses outside the department of mathematics but related to the program, usually from physics or engineering but occasionally from business, the biological and social sciences

Elective courses in mathematics with graduate credit to total

(b), (c), (d), (e) same as for Option I.

COURSES OF INSTRUCTION**100 Basic Mathematical Analysis (4) Fall, Spring**

Prerequisite: Two years of high school mathematics (algebra, geometry, or trigonometry) or the equivalent. College algebra, trigonometry and elementary statistics to include number system, graphs, functions,

equations, exponents, logarithms, inequalities, trigonometry with emphasis upon analysis, standard deviation, correlation coefficient.

120 College Arithmetic (3) Fall, Spring

Prerequisite: Satisfactory performance on arithmetic section of college entrance examination. Designed primarily for prospective elementary teachers, but open to others. Objectives are understanding and appreciation of the fundamentals of arithmetic, with some attention to historical and recreational aspects.

**140 Basic Mathematics for Business and Social Sciences (3)
Fall, Spring**

Prerequisite: Elementary algebra or one year of high school algebra. Fundamental concepts and skills in arithmetic and algebra needed in business and social sciences.

201 Analytic Geometry and Calculus I (4) Fall, Spring

Prerequisite: Mathematics 100 or equivalent. Analytic geometry of the straight line, function, limit, derivative of algebraic functions, integral, maxima, minima, area and a variety of simple applications.

202 Analytic Geometry and Calculus II (4) Fall, Spring

Prerequisite: Mathematics 201. Derivatives and integrals of trigonometric, inverse trigonometric, logarithmic, and exponential functions, analytic geometry of conic sections, translation and rotation of axes, polar co-ordinates, additional applications of differentiation and integration.

203 Analytic Geometry and Calculus III (4) Fall, Spring

Prerequisite: Mathematics 202. Infinite series, Taylor's and MacLaurin's theorems, analytic geometry of three dimensions, functions of several variables, partial differentiation, multiple integrals, areas, volumes, work, moments and other applications to physics and engineering.

**240 Introductory Mathematical Analysis for Business (3)
Fall, Spring**

Prerequisite: Satisfactory score on an algebra proficiency test to be administered to all entering business majors. Graphical analysis; elementary differential and integral calculus, with applications to business and economics.

302 Advanced Engineering Mathematics (3) Fall, Spring

Prerequisite: Mathematics 203. Ordinary differential equations, simultaneous ordinary differential equations, linear independence and Wronskians, power series solutions, Fourier series, partial differential equations.

**320 Selected Topics in the History of Mathematics (3)
Fall, Spring**

Prerequisite: Mathematics 202 (may be taken concurrently). Traces the development of fundamental concepts and techniques in the fields of algebra, geometry and trigonometry.

340 (440) Theory of Algebraic Equations (3) Fall, Spring

Prerequisite: Mathematics 202. Complex numbers, properties of polynomials, with especial reference to the field concept; equations in the fields of rational numbers, real numbers. Elimination, resultants; algebraic extensions of a field, cubic equations, constructability problems.

353 Mathematics for General Education (3) Fall, Spring

Prerequisite: Mathematics 120 or equivalent. Vital concepts; elementary aspects of new developments in mathematics. Designed for students of the arts and social sciences; includes number system; units and arithmetic of computation; various relationships between quantities; notions of probability; elementary selections from modern mathematics, e.g., logic of electronic computers, truth tables, political structures, games of strategy; new horizons. May not be used for major or minor in mathematics.

370 Digital Computer Programming (3) Fall, Spring

Prerequisite: Mathematics 201. Functions and features of digital computers; flow charts, commands, controls, debugging, subroutines, compilers; prime objective: student choice of problem from field of mathematics and/or the several sciences, personal preparation of program and use of computer.

380 Intermediate Analysis (3) Fall, Spring

Prerequisite: Mathematics 203. The real number system. Functions, sequences, limits, continuity. The Cauchy criterion. Law of the mean. Fundamental theorem of integral calculus.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

401 Differential Equations (3) Fall, Spring

Prerequisite: Mathematics 203. Beginning course in differential equations emphasizing their application in science and engineering.

402 Advanced Engineering Mathematics II (3) Fall, Spring

Prerequisite: Mathematics 302 or equivalent. Elements of vector analysis, complex variables, operational methods, special functions, boundary value problems.

403 Partial Differential Equations (3)

Prerequisite: Mathematics 401. Partial differential equations, partial differential equations of classical physics, orthogonal sets of functions, Fourier series and integrals, Bessel functions, Legendre polynomials, solutions of boundary value problems, applications to heat flow, fluid flow, vibrations of strings and membranes, potential theory.

405 Laplace Transform (3)

Prerequisite: Mathematics 461 or equivalent. The Laplace transform, use in solving linear ordinary and partial differential equations, solution

of boundary value problems, applications to transient electrical and dynamic phenomena.

410 Vector Analysis (3)

Prerequisite: Mathematics 203. Vector algebra and calculus, vector fields, gradient, divergence, curl, divergence theorem, Stokes' theorem, applications to geometry, potential theory and mathematical physics.

411 Tensor Analysis (3)

Prerequisite: Mathematics 410 or equivalent. Vectors in n -dimensional Euclidean space. The imbedding hypothesis. Covariant and contravariant representations. Euler's equations. The Christoffel symbols and covariant differentiation. Parallelism, and parallel displacement. The general theory of relativity. Introduction to function spaces.

420 Overview of Secondary Mathematics (3) Fall, Spring

Prerequisite: Mathematics 202. Study of subject-matter of secondary mathematics, including selections from "modern" mathematics, directed toward a thorough understanding of basic concepts and ideas.

430 Introduction to Modern Geometry (3)

Prerequisite: Mathematics 202. Study of some of the synthetic geometry developed since the time of Euclid: a brief survey of non-Euclidean geometry.

432 Higher Geometry (3)

Prerequisite: Mathematics 202. Homogeneous and projective co-ordinates, invariants, duality, Desargues' and Pappus' theorems, transformations, synthetic and analytic treatment of conics.

442 Linear Algebra and Matrices (3)

Prerequisite: Mathematics 202. Linear transformations, matrices and determinants, algebra of matrices, quadratic forms, characteristic values, reduction of matrices to canonical form.

444 Modern Algebra (3)

Prerequisite: Mathematics 203 or consent of instructor. Introduction to some of the principal concepts of modern algebra, including integral domains, groups, rings, and fields, as well as vector spaces and matrices.

446 Theory of Numbers (3)

Prerequisite: Mathematics 202 and junior standing. Divisibility, Euclidean algorithm, and greatest common divisor. Prime numbers, the fundamental theorem of arithmetic, and the distribution of primes. Congruences. The Fermat-Euler and Wilson theorems. Residues and the quadratic reciprocity law. Bernoulli numbers. Quadratic forms. Diophantine equations.

461 Advanced Calculus I (3) Fall, Spring

Prerequisite: Mathematics 380. Extension of the techniques and ideas of analysis into higher fields essential to more advanced or graduate

work. Includes advanced study of functions of several variables, partial differentiation with applications, multiple integrals, line and surface integrals.

462 Advanced Calculus II (3) Spring

Prerequisite: Mathematics 461 or equivalent. Continuation of Mathematics 461. Includes infinite series of several types, uniform convergence, improper integrals, special functions.

470 Numerical Calculus (3) Fall

Prerequisite: Mathematics 203. Designed to bridge gap between classroom mathematics and such applications as the calculations in aircraft industry or in actuarial work. Includes solution of equations (including methods of approximation), interpolation, numerical integration.

471 Numerical Calculus (3) Spring

Prerequisite: Mathematics 401. Numerical solution of differential equations. Includes finite differences, orthogonal polynomials, least squares, harmonic analysis, smoothing of data.

472 Linear Programming (3)

Prerequisite: Mathematics 203 or 442; or consent of the instructor. The simplex method of optimization with applications. Geometrical aspects of linear programming; convex programming. Imputed values and the dual theorem. Game Theory.

475 Introduction to Mathematical Statistics I (3) Fall

Prerequisite: Mathematics 202. Basic course in theory and application of statistical methods. Theoretical and empirical frequency distributions of one or two variables. Large and small sample theory. Correlation.

476 Introduction to Mathematical Statistics II (3) Spring

Prerequisite: Mathematics 475. Nonparametric methods. Testing "goodness of fit." Testing statistical hypotheses. Design of experiments.

478 Theory of Probability (3)

Prerequisite: Mathematics 380. Definitions of probability and basic theory. Independence and dependence; Markov chains. Probability laws of numerical-valued random phenomena; mean and variance. Normal and Poisson distributions. Random variables; expectation. The law of large numbers and the central limit theorem.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

510A-B Mathematical Methods of Physics (3-3)

Prerequisites: Bachelor's degree in physics, mathematics, or chemistry, or Physics 425AB and 426AB. Solution of typical problems arising in classical and modern physics. Topics include: numerical and analytic treatment of equations; series; tabulated functions; Green's functions and Dirac delta function; asymptotic expansions; eigenvalues and variational methods; Poisson distribution; integral equations. Same as Physics 510AB.

530 Topology (3)

Prerequisite: Graduate standing in mathematics. Basic concepts of point set topology; metrization; compactness and separation properties of spaces; mappings; homology; combinatorial topology.

532 Differential Geometry (3)

Prerequisites: Mathematics 461-462 or Mathematics 410 and 461. Smooth curves and surfaces in three dimensional Euclidean space. First and second fundamental forms. Gaussian curvature and the Gauss-Bonnet theorem.

540 Abstract Algebra (3)

Prerequisites: Mathematics 444 or consent of instructor. Theory of groups, rings, integral domains and ideals; field extensions; Galois theory.

550 Seminar (3) Fall, Spring

Prerequisite: Graduate standing in mathematics. A study of one area of mathematics not usually offered in college courses, e.g., integral equations, theory of games, inequalities, summability, unique approaches to topics in elementary mathematics at all grade levels, current research problems; development of ability to use and organize journal and reference materials for effective presentation.

580 Functions of Real Variables (3)

Prerequisites: Mathematics 461 or 203 and consent of instructor. Critical development of real number system, limits, continuity, infinite processes, Riemann and Stieltjes integration, introduction to theory of measure and Lebesgue integration.

582 Functions of Complex Variables (3)

Prerequisites: Mathematics 461 or 203 and consent of instructor. Complex numbers, analytic functions, elementary functions, series, Cauchy theory, theory of residues, conformal mapping, Schwarz-Christoffel transformation, applications to heat flow, fluid flow, potential theory.

599 Graduate Project (3) Fall, Spring

Prerequisite: Graduate standing in mathematics. Directed research and thesis development.

MICROBIOLOGY AND PUBLIC HEALTH

(In the Division of Science and Mathematics)

STAFF: Anderson (Department Head), Andreoli, Bair, Seto, Tamblyn. *Part-time:*
Dozois, Heidbreder, Senn.

BACHELOR'S DEGREE CURRICULA

Major in Microbiology

The major program in microbiology is designed to provide adequate basic training in microbiology and related fields, such as chemistry. It will qualify a student for (a) graduate study in the field; (b) various types of federal employment; (c) work in the state civil service system, particularly as a public health microbiologist; (d) industrial microbiological work in such divergent fields as the pharmaceutical industry, brewing, industrial fermentations and the dairy industry; (e) entrance into medical and dental school (by selecting a small number of additional elective courses); (f) work as a hospital microbiologist; (g) positions as research technicians in various university research projects.

Lower Division

Microbiology 200—General Microbiology	5 units
Botany 100—General Botany or	
Zoology 100—General Zoology	5 units
Chemistry 101—General Chemistry	5 units
Chemistry 102—General Chemistry and	
Qualitative Analysis	5 units
Chemistry 201—Quantitative Analysis I	3 units
Mathematics 100—Basic Mathematical Analysis	4 units
Physics 101—Physics I	4 units
Physics 102—Physics II	4 units

Upper Division

Microbiology 303—Medical Bacteriology	5 units
Microbiology 304—Immunology and Serology	3 units
Microbiology 305—Microbiological Methods for Public Health	2 units
Microbiology 401—General Virology	2 units
Microbiology 430—Microbial Physiology and Cytology	5 units
Microbiology 440—Systematic Bacteriology	2 units
Chemistry 401AB—Organic Chemistry	6 units
Chemistry 403AB—Organic Chemistry Laboratory	2 units
Chemistry 431AB—Biochemistry I	8 units

70 units

Major in Medical Technology

The following program has been approved for training of medical laboratory technicians. A total of 132 units is required for graduation with a major in medical technology. (Bachelor of Science Degree)

On completion of this major and an internship a student will be eligible to take the examination to become a Registered Medical Technologist. This will lead to employment in hospitals, public health laboratories and certain private, state and federal research laboratories.

Lower Division

Mathematics 100—Basic Mathematical Analysis	4 units
Microbiology 200—General Microbiology	5 units
Chemistry 101—General Chemistry	5 units
Chemistry 102—General Chemistry and Qualitative Analysis	5 units
Chemistry 201—Quantitative Analysis	3 units
Physics 101—Physics I	4 units
Physics 102—Physics II	4 units
Zoology 100—General Zoology	5 units

Upper Division

Microbiology 303—Medical Bacteriology	5 units
Microbiology 304—Immunology and Serology	3 units
Microbiology 305—Microbiological Methods for Public Health	2 units
Microbiology 340—Medical Mycology	2 units
Microbiology 401—General Virology	2 units
Zoology 462—Parasitology	3 units
Chemistry 401AB—Organic Chemistry	6 units
Chemistry 403AB—Organic Chemistry Laboratory	2 units
Chemistry 431AB—Biochemistry I	8 units
Chemistry 433—Clinical Biochemistry	3 units
Electives—Approved upper division courses	3 units
(Biological Science 420—Histological Methods (3) recommended.)	

 76 units

Major in Sanitary Science

The Sanitary Science major (Bachelor of Science—128 units) was developed with assistance from the Los Angeles City and County Health Departments and meets provisions of the California State Health and Safety Code. Completion of this program qualifies a student for the Registered Sanitarian (R.S.) examination and leads to employment as a sanitarian in city, county or state health departments, and in certain federal agencies. Many large industries now employ registered sanitarians in their industrial health programs.

Lower Division

Microbiology 200—General Microbiology	5 units
Zoology 100—General Zoology	5 units
Chemistry 101-102—General Chemistry	10 units
Mathematics 100—Basic Mathematical Analysis	4 units
Physics 101—Physics I	4 units
Physics 102—Physics II	4 units

Upper Division

Required courses in Public Health and Biological Sciences	
Public Health 310—Physical Principles of Sanitation	3 units
Public Health 311—Environmental Sanitation Control	3 units
Public Health 312—Community Control of Communicable Diseases	3 units
Public Health 313—Public Health Administration	3 units

Public Health 420—Public Health Microbiology	4 units
Zoology 441—General Entomology	4 units
Required courses in Physical Science	
Chemistry 308—Elementary Organic Chemistry	4 units
Physics 441—Radiation Physics	3 units
Physics 442—Radiation Physics Laboratory	2 units
Electives chosen from the following courses in the Biological Sciences 4-12	units
Biological Science 410—Genetics	3 units
Botany 425—Mycology	4 units
Microbiology 303—Medical Bacteriology	5 units
Microbiology 340—Medical Mycology	2 units
Microbiology 401—Viruses	2 units
Microbiology 420—Food Microbiology	4 units
Zoology 442—Medical Entomology	3 units
Approved Electives	0-8 units

69-73 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR MICROBIOLOGY MAJOR

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
*Engl. 150—Written Expr. <i>or</i>		Chem. 102—Gen. Chemistry	5
Lang. Arts 150A	3	Zool. 100—Gen. Zoology <i>or</i>	
Chem. 101—Gen. Chemistry	5	Botany 100—Gen. Botany	5
Math. 100—Basic Math. Analysis	4	*Sp. 150—Oral Expr. <i>or</i>	
P.E. 150	1	Lang. Arts 150B	3
Govt. 150—Govt. and Amer. Soc. 3	3	Phys. Educ. elective	1
		Art 150—Art, Music, Dance	3

SOPHOMORE YEAR

Micro. 200—Gen. Micro.	5	Chem. 201—Quant. Analysis	3
Physics 101—Physics I	4	Physics 102—Physics II	4
Phil. 150—Phil. Ideas	3	Engl. 250—Understanding Lit.	3
Psych. 150—Human Behavior	3	Hist. 250—U. S. History	3
		Gen. Educ. Soc. Sci. elective	3

JUNIOR YEAR

Micro. 303—Medical. Bact.	5	Micro. 304—Immunology & Serology	3
Chem. 401A—Org. Chem.	3	Micro. 305—Methods in Public Health	2
Chem. 403A—Org. Chem. Lab.	1	Chem. 401B—Org. Chem.	3
Micro. 440—System. Bact.	2	Chem. 403B—Org. Chem. Lab.	1
H&S 350—Personal Health	2	Gen. Educ. elective	3
Elective	3	Elective	3

SENIOR YEAR

Chem. 431A—Biochemistry	4	Chem. 431B—Biochemistry	4
Micro. 401—Gen. Virology	2	Micro. 430—Physiol. and Cytol.	5
Gen. Educ. elective	3	Electives	6
Electives	7		

* See "Note" on page 61.

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR MEDICAL TECHNOLOGY MAJOR

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Chem. 101—Gen. Chemistry	5	Chem. 102—Gen. Chemistry	5
Math. 100—Basic Math. Analysis....	4	Zool. 100—Gen. Zoology	5
*Engl. 150—Written Expr. <i>or</i>		*Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3
Govt. 150—Govt. and Amer. Soc.	3	Art 150—Art, Music, Dance	3
P.E. 150	1	Phys. Educ. elective	1

SOPHOMORE YEAR

Micro. 200—Gen. Micro.	5	Chem. 201—Quant. Anal.	3
Physics 101—Physics I	4	Physics 102—Physics II	4
Phil. 150—Phil. Ideas	3	H&S 350—Personal Health	2
Psych. 150—Human Behavior	3	Engl. 250—Understanding Lit.	3
		Hist. 250—U. S. History	3

JUNIOR YEAR

Micro. 303—Medical Bact.	5	Micro. 304—Immunology & Serology	3
Chem. 401A—Org. Chemistry	3	Micro. 305—Methods in Public Health	2
Chem. 403A—Org. Chem. Lab.	1	Micro. 340—Medical Mycol.	2
Gen. Educ. Soc. Sci. elective	3	Chem. 401B—Org. Chem.	3
Micro. 320—Hematology	2	Chem. 403B—Org. Chem. Lab.	1
Elective	3	Gen. Educ. elective	3
		Electives	3

SENIOR YEAR

*Biol. Sci. 420—Hist. Methods....	3	Micro. 401—Gen. Virology	2
Zool. 462—Parasitology	3	Chem. 431B—Biochemistry	4
Chem. 431A—Biochemistry	4	Chem. 433—Clinical Biochemistry	3
Gen. Educ. elective	3	Electives	7
Elective	4		

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR SANITARY SCIENCE MAJOR

FRESHMAN YEAR

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Math. 100—Basic Math. Analysis....	4	Chemistry 102—General Chemistry	5
Chem. 101—General Chemistry	5	Zoology 100—General Zoology	5
Engl. 150—Written Expression <i>or</i>	3	Sp. 150—Oral Expression <i>or</i>	3
Language Arts—150A		Language Arts—150B	
Govt. 150—Govt. and Amer. Soc.	3	Art 150—Art, Music, Dance	3
P.E. 150	1		

SOPHOMORE YEAR

Physics 101—Physics I	4	Physics 102—Physics II	4
Micro. 200—General Microbiology	5	H & S 350—Personal Health	2
Phil. 150—Phil. Ideas	3	Engl. 250—Underst. Lit.	3
Psych. 150—Human Behavior	3	Hist. 250—U.S. History	3
P.E. Elective	1	Electives †	4

See "Note" on page 61.

* This course recommended but not required.

A minimum of 8 elective units must be selected with the approval of an adviser.

JUNIOR YEAR

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Public Health 310—Phys. Prin.		Public Health 311—Environ.	
Sanit. _____	3	San. Contr. _____	3
Chem. 308—Elem. Organic		Public Health 312—Comm. Control	
Chemistry _____	4	Comm. Diseases _____	3
Gen. Educ. Soc. Sci. elective _____	3	Physics 441—Radiation Physics _____	3
Electives* _____	6	Physics 442—Radiation Physics	
		Lab. _____	2
		Electives* _____	5

SENIOR YEAR

Public Health 313—P. H. Admin.	3	Public Health 420—P. H. Micro.	4
Gen. Educ. electives _____	5	Zool. 441—General Entomology _____	4
Electives* _____	8	Electives* _____	8

COURSES OF INSTRUCTION

200 General Microbiology (5)

Prerequisite: Chemistry 101, Botany 100, or Zoology 100. Basic principles of microbiology. Emphasizes nature, distribution, physiological activities of micro-organisms; place of micro-organisms in nature; microbiology of water, soil, dairy products, other foods, and industrial applications; medical aspects; microbiological techniques. For majors in microbiology and related fields. Lecture three hours; laboratory six hours.

303 Medical Bacteriology (5) Fall

Prerequisite: Microbiology 200. Bacteriology, immunology, and epidemiology of bacteria-caused infectious diseases of man and of animals. Diagnostic procedures for identification of such pathogens. Lecture three hours; laboratory six hours.

304 Immunology and Serology (3) Spring

Prerequisite: Microbiology 303. Fundamentals of immunology and serology; laboratory production of antigens and antisera; serological tests commonly used for the detection of disease. Lecture one hour; laboratory six hours.

305 Microbiological Methods for Public Health (2) Spring

Prerequisite: Microbiology 303. Standard laboratory methods for the examination of water, sewage, milk, and foods; air sampling procedures. Lecture one hour; laboratory three hours. (Credit not allowed for both Microbiology 305 and Public Health 420)

320 Hematology (2) Fall, Spring

Prerequisite: Zoology 100 or course in physiology. Basic principles of hematology; experience in making complete blood counts, hemoglobin determinations, typing and cross-matching, and other related procedures. Lecture one hour; laboratory three hours.

* A minimum of 8 elective units must be selected with the approval of an adviser.

340 Medical Mycology (2) Fall, Spring

Prerequisite: Microbiology 200. Introduction to pathogenic fungi commonly responsible for mycotic infections of man. Lecture one hour; laboratory three hours.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

401 General Virology (2) Fall, Spring

Prerequisites: Microbiology 200 and 303, or consent of instructor. Principles of virology emphasizing multiplication, isolation, cultivation, genetics, and viral-host interrelations of animal, bacterial, and plant viruses. Lecture two hours.

402 Virology Laboratory (1) Fall, Spring

Prerequisites: Microbiology 200 and 303. Methods of isolation, cultivation, and identification of animal and bacterial viruses. Laboratory three hours. (Course to accompany or follow Microbiology 401)

420 Food Microbiology (4)

Prerequisites: Microbiology 200 and Chemistry 401AB. Study of micro-organisms of importance in food industries with special reference on spoilage, preservation, fermentations and food borne infections. Lecture three hours; laboratory three hours.

425 Soil Microbiology (4)

Prerequisites: Microbiology 200 and Chemistry 401AB. Microflora and microfauna of the soil, their importance in economy of nature; characteristics and activities of major physiological groups; special laboratory techniques involved; practical considerations.

430 Bacterial Physiology and Cytology (5) Spring

Prerequisites: Microbiology 200, Chemistry 431. Study of activities and functions of bacteria with emphasis on structure, growth, nutrition, and metabolism.

440 Systematic Bacteriology (2) Fall

Prerequisite: Microbiology 200. Relationship of bacteria to other living forms; rules of nomenclature; systematics as applied to the orders, families, and genera of the Schizomycetes.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

510 Microbial Genetics (2)

Prerequisites: Microbiology 200 and Biological Science 410 or equivalents. Concepts of microbial genetics including, dissociation, transforma-

tion, transduction, gene transfer, and biochemical mutation; laboratory techniques; practical aspects such as antibiotic resistance. Lecture one hour; laboratory three hours.

PUBLIC HEALTH

310 Physical Principles of Sanitation (3) Fall

Techniques in general sanitation covering construction and maintenance of water facilities, filters, sewage disposal, heating, ventilation, lighting, plumbing, and housing.

311 Environmental Sanitation Control (3) Spring

Prerequisite: Public Health 310 or consent of instructor. Study of waste disposal, insect, rodent, and nuisance control, control of food, and housing sanitation.

312 Community Control of Communicable Diseases (3) Spring

Prerequisite: Public Health 310 or consent of instructor. Epidemiology, modes of transmission, and community control of communicable diseases, including tuberculosis and the venereal infections.

313 Public Health Administration (3) Fall

Prerequisite: Public Health 310 or consent of instructor. Study of agencies dealing with sanitation. Organization of health departments, office procedures, laws and legal regulations, and public relations.

420 Public Health Microbiology (4) Spring

Prerequisite: Microbiology 200 or consent of instructor. Sanitary and laboratory applications of microbiology considering particularly water-borne diseases, water testing and treatment, sewage disposal, milk testing, food testing, restaurant and air sanitation. Lecture three hours; laboratory three hours.

MUSIC

(In the Division of Fine Arts)

STAFF: Snyder (Department Head), Albersheim, Andreas, Baxter, Beckstead, Griffith, Hansen, Hubbard, Knox, Kopp, Leidig, Mullins, Nichols, Runge, Schlietstett, Schubert, Stern, Susca, Timmerman, Van Deman, Wood.

BACHELOR'S DEGREE CURRICULA

This degree is designed for students desiring a special or general secondary teaching credential with a major in music, for those seeking a professional career in the field of music, and for those who have an avocational interest in music.

Major in Music

Lower Division

Music 160AB—Theory I and II and Piano Laboratory.....	8 units
(Equivalent to transfer courses: Musicianship I and II, Harmony I and II, Piano I and II, and Counterpoint I.)	
Music 260AB—Theory III and IV and Solo Performance Laboratory.....	6 units
(Equivalent to transfer courses: Harmony III and IV, Musicianship III and IV, and Form.)	
Music 231A—Functional Voice for Music Majors	2 units
Select from the following	4 units
Music 110 sp, bw (2-2)	
Music 210 s,b,w,p (2-2-2-2)	
Select from the following	3 units
Music 320 S-Z—Band (1-1-1-1-1-1-1)	
Music 321 S-Z—Orchestra (1-1-1-1-1-1-1)	
Music 326 S-Z—A Cappella Choir (1-1-1-1-1-1-1)	
Music 327 S-Z—Chorus (1-1-1-1-1-1-1)	

Upper Division

Music 360—Orchestration and Arranging.....	2 units
Music 370AB—History of Music in Western Civilization.....	6 units
(Equivalent to transfer course: Music History I and II.)	
Music 381—Choral Conducting	2 units
Music 340AB—Functional Piano	2 units
In preparation for Senior Recital select from the following	3 units
Music 415 S-Z—Advanced Strings (1-1-1-1-1-1-1)	
Music 416 S-Z—Advanced Woodwinds (1-1-1-1-1-1-1)	
Music 417 S-Z—Advanced Brass (1-1-1-1-1-1-1)	
Music 418 S-Z—Advanced Percussion (1-1-1-1-1-1-1)	
Music 435 S-Z—Advanced Voice (1-1-1-1-1-1-1)	
Music 445 S-Z—Advanced Piano (1-1-1-1-1-1-1)	
Music 446 S-Z—Advanced Organ (1-1-1-1-1-1-1)	
Select from the following	4 units
Music 320 S-Z—Band (1-1-1-1-1-1-1)	
Music 321 S-Z—Orchestra (1-1-1-1-1-1-1)	
Music 326 S-Z—A Cappella Choir (1-1-1-1-1-1-1)	
Music 327 S-Z—Chorus (1-1-1-1-1-1-1)	

42 units

Students demonstrating competence in excess of minimum requirements in performance and theory may earn advanced standing. It is permissible for a lower division student to register for and earn credits in upper division performance courses.

SPECIAL SECONDARY TEACHING MAJOR

Designed for those who expect to teach music in the public elementary or secondary schools. See pages 152-153 for professional education requirements. In addition to the required Bachelor Degree Curriculum for the Major in Music, students should select courses in either Choral or Instrumental Focus. Students who have completed music requirements for the teaching credential at another institution must complete four (4) units in music courses and participate in one performance organization at Los Angeles State College.

Choral Focus—For students planning to teach choral music.

Music Major Requirements	42 units
Music 231B—Functional Voice for Music Majors	2 units
Music 382—Instrumental Conducting	2 units
Select from the following:	2 units
Music 405—Piano Methods (2)	
Music 406—Vocal Pedagogy (2)	
Music 465—Choral Arranging (2)	

48 units

Instrumental Focus—For students planning to teach instrumental music.

Music Major Requirements	42 units
Select from the following: (courses not selected as part of music major core)	4 units
Music 210s—Stringed Instruments (2)	
Music 210b—Brass Instruments (2)	
Music 210w—Woodwind Instruments (2)	
Music 210p—Percussion Instruments (2)	
Music 382—Instrumental Conducting	2 units

48 units

General Secondary Teaching Major

The music requirements for the general secondary credential in music are the same as those for the special secondary credential. See pages 151-152 for professional education requirements. A teaching minor in a different teaching field and a graduate year including additional professional education courses are required for the general secondary credential.

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR MUSIC MAJOR (Noncredential)

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Music 160A—Theory I	4	Music 160B—Theory II	4
Music 110 sp—Orches. Instruments	2	Music 110 bw—Orches. Instru- ments	2
Music 415, 416, 417, 435, 445, or 446	1	Music 231A—Funct. Voice	2
Music 320, 321, 326, or 327	1	Music 320, 321, 326, or 327	1
*Engl. 150—Written Expr. <i>or</i>		*Spch. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3
Biol. Sci. 153—Prin. of Biology <i>or</i>		Art 150—Art, Music, Dance	3
Phys. Sci. 151	3	Phys. Educ. elective	1
P.E. 150	1		

SOPHOMORE YEAR

Music 260A—Theory III	3	Music 260B—Theory IV	3
Phil. 150—Phil. Ideas	3	Music 415, 416, 417, 435, 445, or 446	1
Biol. Sci. 153—Prin. of Biology <i>or</i>		Music 320, 321, 326, or 327	1
Phys. Sci. 151	3	Biol. Sci. 154—Prin. of Biology <i>or</i>	
Psych. 150—Human Behavior	3	Phys. Sci. 152	3
Elective	4	Engl. 250—Understanding Lit.	3
		Govt. 150—Govt. & Amer. Soc.	3
		Elective	2

JUNIOR YEAR

Music 370A—Hist. of Music	3	Music 370B—Hist. of Music	3
Music 360—Orch. & Arranging	2	Music 381—Choral Conducting	2
Music 340A—Funct. Piano	1	Music 340B—Funct. Piano	1
Music 320, 321, 326, or 327	1	Music 320, 321, 326, or 327	1
Gen. Educ. Soc. Sci. elective	3	H&S 350—Personal Health	2
Hist. 250—U. S. History	3	Elective	6
Elective	2		

SENIOR YEAR

Music 320, 321, 326, or 327	1	Music 415, 416, 417, 435, 445, or 446	1
Gen. Educ. elective	3	Music 320, 321, 326, or 327	1
Electives	12	Gen. Educ. elective	3
		Electives	11

* See "Note" on page 61.

**SUGGESTED COURSE SEQUENCE FOR MUSIC MAJOR
WITH SPECIAL SECONDARY CREDENTIAL
(Instrumental Focus)**

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Music 160A—Theory I.....	4	Music 160B—Theory II.....	4
Music 210p—Percussion Instru- ments	2	Music 210s—Stringed Instruments..	2
Music 415, 416, 417, 435, 445, or 446	1	Music 281A—Funct. Voice	2
*Engl. 150—Written Expr. <i>or</i>		Music 320, 321, 326, or 327	1
Lang. Arts 150A	3	*Spch. 150—Oral Expr. <i>or</i>	
Biol. Sci. 153—Prin. of Biology <i>or</i>		Lang. Arts 150B	3
Phys. Sci. 151	3	Art 150—Art, Music, Dance	3
P.E. 150	1	Phys. Educ. elective.....	1

SOPHOMORE YEAR

Music 261A—Theory III.....	3	Music 261B—Theory IV.....	3
Music 210w—Woodwinds	2	Music 210b—Brass Instruments	2
Music 320, 321, 326, or 327	1	Music 415, 416, 417, 435, 445, or 446	1
Phil. 150—Phil. Ideas	3	Biol. Sci. 154—Prin. of Biology <i>or</i>	
Biol. Sci. 153—Prin. of Biology <i>or</i>		Phys. Sci. 152	3
Phys. Sci. 151	3	Engl. 250—Understanding Lit.	3
Psych. 150—Human Behavior.....	3	Govt. 150—Govt. & Amer. Soc.	3
		Elective	1

JUNIOR YEAR

Music 370A—Hist. of Music.....	3	Music 370B—Hist. of Music.....	3
Music 360—Orches. & Arranging..	2	Music 381—Choral Conducting	2
Music 340A—Funct. Piano	1	Music 340B—Funct. Piano	1
Music 320, 321, 326, or 327	1	Music 320, 321, 326, or 327	1
Educ. 300—Intro. Cred. Prog.	N.Cr.	Educ. 471—Sec. Educ.	5
Educ. 490—Audio-Visual	2	Hist. 250—U. S. History	3
Educ. 413—Psych. & Soc.	5		
Elective	1		

SENIOR YEAR

Music 320, 321, 326, or 327	1	Music 415, 416, 417, 435, 445, or 446	1
Music 382—Instrumental Conduct.	2	Music 320, 321, 326, or 327	1
Gen. Educ. Soc. Sci. elective.....	3	Educ. 443YZ—Directed Teaching ..	6
H&S 350—Personal Health	2	Educ. 444YZ—Prob. in Sec. Tching	3
Educ. 493MuA—Methods	2	Gen. Educ. elective.....	3
Gen. Educ. elective	3	Elective	2
Elective	3		

* See "Note" on page 61.

SUGGESTED COURSE SEQUENCE FOR MUSIC MAJOR WITH SPECIAL SECONDARY CREDENTIAL (Choral Focus)

FRESHMAN YEAR SAME AS FOR NONCREDENTIAL MAJOR

SOPHOMORE YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Music 260A—Theory III	3	Music 260B—Theory IV	3
Music 231B—Funct. Voice	2	Music 415, 417, 435, 445, or 446	1
Phil. 150—Phil. Ideas	3	Music 320, 321, 326, or 327	1
Biol. Sci. 153—Prin. of Biology <i>or</i>		Biol. Sci. 154—Prin. of Biology <i>or</i>	
Phys. Sci. 151	3	Phys. Sci. 152	3
Psych. 150—Human Behavior	3	Engl. 250—Understanding Lit.	3
Elective	1	Govt. 150—Govt. & Amer. Soc.	3
		Elective	2

JUNIOR YEAR

Music 370A—Hist. of Music	3	Music 370B—Hist. of Music	3
Music 360—Orches. and Arranging	2	Music 381—Choral Conducting	2
Music 340A—Funct. Piano	1	Music 340B—Funct. Piano	1
Music 320, 321, 326, or 327	1	Music 320, 321, 326, or 327	1
Educ. 300—Intro. Cred. Prog.	N.Cr.	Educ. 471—Sec. Educ.	5
Educ. 490—Audio-Visual	2	Hist. 250—U. S. History	3
Educ. 413—Psych. & Soc.	5		
Elective	1		

SENIOR YEAR

Music 382—Instrumental Conduct.	2	Music 415, 416, 417, 435, 445, or 446	1
Music 320, 321, 326, or 327	1	Music 320, 321, 326, or 327	1
Gen. Educ. Soc. Sci. elective	3	Gen. Educ. elective	3
H&S 350—Personal Health	2	Educ. 443YZ—Directed Teaching	6
Gen. Educ. elective	3	Educ. 444YZ—Prob. in Sec. Tchnng.	3
Music 405, 406, or 465	2	Elective	2
Educ. 493MuB—Methods	2		
Elective	1		

SUGGESTED COURSE SEQUENCE FOR MUSIC MAJOR WITH GENERAL SECONDARY CREDENTIAL (Instrumental Focus)

FRESHMAN YEAR AND SOPHOMORE YEAR SAME AS FOR
SPECIAL SECONDARY—INSTRUMENTAL FOCUS

JUNIOR YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Music 370A—Hist. of Music	3	Music 370B—Hist. of Music	3
Music 360—Orches. and Arranging	2	Music 381—Choral Conducting	2
Music 340A—Funct. Piano	1	Music 340B—Funct. Piano	1
Music 320, 321, 326, or 327	1	Music 320, 321, 326, or 327	1
Educ. 300—Intro. Cred. Prog.	N.Cr.	Educ. 471—Sec. Educ.	5
Educ. 413—Psych. & Soc.	5	Hist. 250—U. S. History	3
Minor	3		

SENIOR YEAR

<i>First Semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Music 382—Instrumental Conduct.	2	Music 415, 416, 417, 435, 445, or 446	1
Music 320, 321, 326, or 327	1	Music 320, 321, 326, or 327	1
Gen. Educ. Soc. Sci. elective	3	Gen. Educ. elective	3
H&S 350—Personal Health	2	Educ. 493MuA—Methods (Major)	2
Gen. Educ. elective	3	Educ. 493—Methods (Minor)	2
Minor	5	Minor	7

GRADUATE YEAR

Educ. 442Y—Directed Teaching	3	Educ. 442Z—Directed Teaching	3
Educ. 444Y—Prob. in Sec. Tchng.	1	Educ. 444Z—Problems in Sec. Tchng.	2
Educ. 490—Audio-Visual	2	Educ. 480—Fund. Counsel. and Guid.	2
Minor	6	Minor	2
Electives	4	Electives	7

**SUGGESTED COURSE SEQUENCE FOR MUSIC MAJOR
WITH GENERAL SECONDARY CREDENTIAL
(Choral Focus)**

**FRESHMAN, SOPHOMORE, AND JUNIOR YEARS SAME AS FOR
INSTRUMENTAL FOCUS**

SENIOR YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Music 382—Instrumental Conduct.	2	Music 415, 416, 417, 435, 445, or 446	1
Music 320, 321, 326, or 327	1	Music 320, 321, 326, or 327	1
Music 405, 406, or 465	2	Gen. Educ. elective	3
Soc. Sci. elective	3	Educ. 493MuB—Methods (Major)	2
H&S 350—Personal Health	2	Educ. 493—Methods (Minor)	2
Gen. Educ. elective	3	Minor	7
Minor	3		

GRADUATE YEAR

Educ. 442Y—Directed Teaching	3	Educ. 442Z—Directed Teaching	3
Educ. 444Y—Prob. in Sec. Tchng.	1	Educ. 444Z—Prob. in Sec. Tchng	2
Educ. 490—Audio-Visual	2	Educ. 480—Fund. Counsel & Guid.	2
Minor	6	Minor	2
Electives	4	Electives	7

General Secondary Teaching Minor

See pages 151-152 for professional education requirements. A teaching major in a different teaching field is required for the general secondary credential.

The music minor program prepares the student for teaching general music only: the only methods course which will satisfy the requirements will be Ed 493 MuC, Methods of Teaching Elementary Music.

General Requirements:

For students already possessing adequate skills, certain of the stated requirements involving performance competencies such as piano, voice, and the instruments, may be waived and other music units substituted.

Lower Division

Music 160AB—Theory I and II and Piano Laboratory	8 units
Select from the following	2 units
Music 230AB—Elementary Voice Instruction (1-1)	
Music 231AB—Functional Voice for Music Majors (2-2)	
Select from the following	2 units
Music 110sp, bw (2-2)	
Music 210 s,b,w,p (2-2-2-2)	

Upper Division

Music 371—Music Appreciation	3 units
Music 381—Choral Conducting	2 units
Music 340AB—Functional Piano	2 units
In preparation for individual performance select from the following	1 unit
Music 415 S-Z—Advanced Strings (1-1-1-1-1-1-1)	
Music 416 S-Z—Advanced Woodwinds (1-1-1-1-1-1-1)	
Music 417 S-Z—Advanced Brass (1-1-1-1-1-1-1)	
Music 418 S-Z—Advanced Percussion (1-1-1-1-1-1-1)	
Music 435 S-Z—Advanced Voice (1-1-1-1-1-1-1)	
Music 445 S-Z—Advanced Piano (1-1-1-1-1-1-1)	
Music 446 S-Z—Advanced Organ (1-1-1-1-1-1-1)	
Select from the following	2 units
Music 320 S-Z—Band (1-1-1-1-1-1-1)	
Music 321 S-Z—Orchestra (1-1-1-1-1-1-1)	
Music 326 S-Z—A Capella Choir (1-1-1-1-1-1-1)	
Music 327 S-Z—Chorus (1-1-1-1-1-1-1)	

 22 units
MASTER OF ARTS DEGREE

Two graduate curricula in Music are available, each leads to the Master of Arts degree. One is designed for those students seeking a concentration in music and the other focuses upon music education. Adjustments in either program to meet specific interests and abilities may be made in consultation with the student's adviser.

Concentration in Music

Prerequisite: A baccalaureate degree with a major in music from an accredited institution.

Area of Specialization:

Music 599A—Introduction to Graduate Project	1 unit
Select from the following	3 units
Music 561—Seminar in Composition (3)	
Music 570—Seminar in Musicology (3)	
Music 464—Contemporary Techniques	3 units
Select from the following	6 units
Music 472—History and Literature of Instrumental Music (3)	
Music 477—History and Literature of Vocal Music (3)	
Music 478—History and Literature of American Music (3)	
Music 571—Music of the Baroque Period (3)	
Music 572—Music of the Classic Period (3)	
Music 573—Music of the Romantic Period (3)	

Select from the following.....	1 unit
Music 520—Choral Techniques (1)	
Music 526—Instrumental Techniques (1)	
Select from the following (may be waived in special cases).....	2 units
Music 519 W-Z—Individual Instruction on Instruments (1-1-1-1)	
Music 539 W-Z—Individual Instruction in Voice (1-1-1-1)	
Music 549 W-Z—Individual Instruction on Piano or Organ (1-1-1-1)	
Music 415 S-Z—Advanced Strings (1-1-1-1-1-1-1-1)	
Music 416 S-Z—Advanced Woodwinds (1-1-1-1-1-1-1-1)	
Music 417 S-Z—Advanced Brass (1-1-1-1-1-1-1-1)	
Music 418 S-Z—Advanced Percussion (1-1-1-1-1-1-1-1)	
Music 435 S-Z—Advanced Voice (1-1-1-1-1-1-1-1)	
Music 445 S-Z—Advanced Piano (1-1-1-1-1-1-1-1)	
Music 446 S-Z—Advanced Organ Instruction (1-1-1-1-1-1-1-1)	
Music Electives	3 units
Music 599B—Graduate Project	2 units
Outside the Field of Music.....	6 units
Electives (selected from fields related to the degree program with adviser's approval)	3 units
	30 units

NOTE: Twelve (12) of the 21 units specified in music must be at the 500 level.

A total of four (4) elective units in performance may be applied toward the degree. Of these four a maximum of two may be in minor performance areas. (400 level)

Concentration in Music Education

Prerequisites:

- A baccalaureate degree with a major in music from an accredited institution.
- The possession of a valid teaching credential or concurrent enrollment in the credential program.
- A course in elementary music methods or equivalent experience.

Area of Specialization:

Music 599A—Introduction to Graduate Project.....	1 unit
Select from the following.....	3 units
Music 500—Seminar in Elementary Music Education (3)	
Music 503A—Seminar in Choral Music Education (3)	
Music 504A—Seminar in Instrumental Music Education (3)	
Music 464—Contemporary Techniques	3 units
Select from the following.....	3 units
Music 472—History and Literature of Instrumental Music (3)	
Music 477—History and Literature of Vocal Music (3)	
Music 478—History and Literature of American Music (3)	
Music 571—Music of the Baroque Period (3)	
Music 572—Music of the Classic Period (3)	
Music 573—Music of the Romantic Period (3)	
Select from the following	2 units
Music 581—Advanced Choral Conducting (2)	
Music 582—Advanced Instrumental Conducting (2)	
Select from the following.....	1 unit
Music 520—Choral Techniques (1)	
Music 526—Instrumental Techniques (1)	

Select from the following (may be waived in special cases).....	1 unit
Music 519 W-Z—Individual Instruction on Instruments (1-1-1-1)	
Music 539 W-Z—Individual Instruction in Voice (1-1-1-1)	
Music 549 W-Z—Individual Instruction on Piano or Organ (1-1-1-1)	
Music 415 S-Z—Advanced Strings (1-1-1-1-1-1-1-1)	
Music 416 S-Z—Advanced Woodwinds (1-1-1-1-1-1-1-1)	
Music 417 S-Z—Advanced Brass (1-1-1-1-1-1-1-1)	
Music 418—S-Z—Advanced Percussion (1-1-1-1-1-1-1-1)	
Music 435 S-Z—Advanced Voice (1-1-1-1-1-1-1-1)	
Music 445 S-Z—Advanced Piano (1-1-1-1-1-1-1-1)	
Music 446 S-Z—Advanced Organ Instruction (1-1-1-1-1-1-1-1)	
Music Electives	4 units
Music 599B—Graduate Project	2 units
Outside the Field of Music	6 units
Electives (selected from fields related to the degree program with adviser's approval)	4 units
	30 units

NOTE: Twelve (12) of the 20 units specified in music must be at the 500 level.

A total of four (4) elective units in performance may be applied toward the degree. Of these four a maximum of two may be in minor performance areas. (400 level)

COURSES OF INSTRUCTION

110 **Orchestral Instruments** (2) Fall, Spring

Class instruction in performance upon instruments of the orchestra. Minimum performance competency expected on at least one instrument of each family. Ensemble playing experience provided in the practice orchestra or band. Limited to those students seeking only the A.B. degree, the A.B. degree and special secondary credential with choral focus, or the music minor.

110 **Orchestral Instruments, String and Percussion**

110 **Orchestral Instruments, Brass and Woodwind**

160A-B **Theory I and II and Piano Laboratory** (4-4) Fall, Spring

Prerequisite: Knowledge of the fundamentals of music: pitch names, simple rhythms, etc., and some keyboard skill. Integrated approach to music theory; includes work in sightsinging, rhythmic problems, and essentials of harmony, counterpoint and form. Keyboard experience is emphasized.

210 **Orchestral Instruments** (2) Fall, Spring

Class instruction in orchestral instruments. Knowledge of basic playing techniques and fingering on all instruments. Participation in beginning band or orchestra.

210 **Orchestral Instruments, String**

210 **Orchestral Instruments, Brass**

210 **Orchestral Instruments, Woodwind**

210 **Orchestral Instruments, Percussion**

230A-B Elementary Voice Instruction (1-1)

For nonmusic majors and minors only. Technique of voice production; study of song interpretation; emphasis upon recreational singing; some attention given to elementary musicianship; remedial problems

231A-B Functional Voice for Music Majors (2-2)

Limited to music majors and minors only. Development of vocal instrument; problems of vocal line, parlance, attack, release, tone color. Study of appropriate vocal literature; laboratory period correlated with choral methods.

240A-B-C Class Piano Instruction (1-1-1)

Development of music reading skills, playing by ear, and transposing; emphasis on appropriate music for recreational uses in the home, church and community. Not intended for music majors.

245A-B-C Organ Instruction (1-1-1) Fall, Spring

Prerequisite: Consent of instructor. Class instruction in the technique and repertoire of organ playing.

260A-B Theory III and IV and Solo Performance Laboratory (3-3) Fall, Spring

Prerequisite: Music 160A-B, or equivalent. Continued study of materials of musical composition using more complex forms and more difficult techniques and styles. Writing emphasis will be on the student's major performing medium, and will include some ensemble playing of his own compositions.

263 Counterpoint (2) Fall, Spring

Study of eighteenth century contrapuntal techniques, including some work in the species; invertible counterpoint; motive development; two- and three-part inventions. Introduction to linear counterpoint.

300A-B Music for Children (2-2) Fall, Spring

Methods of teaching music in the elementary schools: rhythmic activities, use of simple instruments, music reading, singing, creative, and listening experiences. Basic methods course for general elementary and kindergarten-primary credentials. Not open to Freshman and Sophomores.

320S-Z Band (1-1-1-1-1-1-1) Fall, Spring

Prerequisite: Consent of instructor.

321S-Z Orchestra (1-1-1-1-1-1-1) Fall, Spring

Prerequisite: Consent of instructor.

322S-Z Varsity Band (1-1-1-1-1-1-1) Fall, Spring

Prerequisite: Ability to play a wind or percussion instrument. A wind ensemble providing performances for athletic events, parades, and other outdoor occasions.

325S-Z Men's Glee Club (1-1-1-1-1-1-1) Fall, Spring

Prerequisite: Consent of instructor. Designed for nonmusic majors

326S-Z A Cappella Choir (1-1-1-1-1-1-1) Fall, Spring

Prerequisite: Consent of instructor.

327S-Z Chorus (1-1-1-1-1-1-1) Fall, Spring

Open to all students. Preparation and performance of standard choral literature, including cantatas, oratorios, and operatic choruses.

340A-B Functional Piano (1-1) Fall, Spring

Prerequisite: Consent of instructor. Development of the keyboard facility demanded by the public schools and the music profession; emphasis on sight reading, transposition, playing by ear, choral score reading, reduced instrumental score reading, improvisation, directing from the piano, playing patriotic numbers in appropriate keys, artistic accompanying, and memorization and artistic performance of music of medium difficulty.

360 Orchestration and Arranging (2) Fall, Spring

Prerequisite: One year of theory or equivalent. It is recommended that Music 210 or 110 be completed prior to this course. Theory and practice of writing for instrumental ensembles. Study of orchestral score and an introduction to symphonic orchestration.

370A-B History of Music in Western Civilization (3-3)

Fall, Spring

Prerequisite: One year of music theory or equivalent. Survey of music in general culture; stylistic development of music shown by playing and discussing typical literature. First semester emphasizes the Medieval through Baroque periods; second semester, the Preclassical to the present.

371 Music Appreciation (3) Fall, Spring

Development of understanding and enjoyment of music through study of its fundamentals, history, and literature. Emphasis on awareness and evaluation of music in our lives. Required attendance at selected concerts. For nonmusic majors only.

381 Choral Conducting (2) Fall, Spring

Prerequisite: Two years harmony, solfege, or equivalent. Principles of choral conducting; problems of choral organization.

382 Instrumental Conducting (2) Fall, Spring

Prerequisite: Music 381. It is recommended that Music 210, or Music 110, be completed prior to this course. Experience offered in transposition, score reading, baton technique, and interpretation of symphonic literature. Recognition of psychologically sound rehearsal procedure. Experience conducting rehearsal orchestra is an integral part of the course.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

400 Practicum in Elementary Music Education (2) Spring

Prerequisite: Music 300AB, or Education 493MuC, or experience teaching special music in the elementary schools. Survey and evaluation of literature for the elementary classroom; devising means for causing music to become a living force in the lives of children.

401 Psychology of Music (2) Spring

Prerequisite: Survey of psychology, educational psychology, and at least 20 units of music. Study of musical personality, perception of music's characteristics, musical taste, and theories of learning applied to musical learning. Survey of standardized tests of musical aptitude, musical achievement, and musical taste.

402 Psychoacoustics of Music (2) Fall 1961

Prerequisite: Music 401. Study of how architectural design, musical instrument construction, electronic recording and reproduction systems, and physiological characteristics of the human ear influence the perception of music's dimensions.

403 Acoustical Analysis of Instrument Construction (2) Fall

Study of the physical and acoustical principles of musical instrument construction with laboratory experiences in evaluating and maintaining instruments.

405 Piano Methods and Materials (2) Fall

Practical procedures for teaching piano, from preschool child to adult level. Methods and materials for public school class and private teaching.

406 Training in Vocal Techniques (2) Spring

Prerequisite: Consent of instructor. Class instruction in methods and materials for teaching voice. Comparative analyses of methods for the child voice, the changing voice, and the mature voice.

410 Orchestral Instruments (2) Fall, Spring

Prerequisite: Music 210 or equivalent. Additional experience playing orchestral instruments. Concentration on instruments other than those played in Music 210.

410 Orchestral Instruments, String

410 Orchestral Instruments, Brass

410 Orchestral Instruments, Woodwind

415S-Z Advanced Strings (1-1-1-1-1-1-1) Fall, Spring

Prerequisite: Consent of instructor. Class instruction in technique and repertoire for advanced students of violin, viola, cello, and bass.

- 416S-Z Advanced Woodwinds** (1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. Class instruction in technique and repertoire for advanced students of woodwind instruments.
- 417S-Z Advanced Brass** (1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. Class instruction in technique and repertoire for advanced students of brass instruments.
- 418S-Z Advanced Percussion** (1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. Class instruction in techniques and repertoire for advanced students of percussion instruments.
- 420S-Z Brass Ensemble** (1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. For advanced students. Rehearsal and performance of standard brass ensemble literature, including brass choir, sextets, quintets, and quartets.
- 421S-Z Woodwind Ensemble** (1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. For advanced students. Rehearsal and performance of standard woodwind ensemble literature, including woodwind choir, sextets, quintets, and quartets.
- 422S-Z String Ensemble** (1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. For advanced students. Rehearsal and performance of standard chamber music for strings alone and strings with piano.
- 425S-Z Madrigal Singers** (1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor.
- 426S-Z Opera Workshop** (1-1-1-1-1-1-1) Fall, Spring
Problems of opera production; presentation of typical operatic ensembles and scenes. Open to qualified singers.
- 430A-B Intermediate Voice** (1-1) Fall, Spring
Prerequisite: Previous voice instruction or consent of instructor. Continued development of vocal skills. Greater emphasis on development of repertoire.
- 435S-Z Advanced Voice** (1-1-1-1-1-1-1) Fall, Spring
Prerequisite: Consent of instructor. Performance of art song, opera, and oratorio literature. Advanced techniques. Primarily for the voice major.
- 441A-B-C Intermediate Piano** (1-1-1) Fall, Spring
Prerequisite: Music 240C or equivalent. Technical study and performance of some of the smaller compositions in the standard piano literature.

445S-Z Advanced Piano (1-1-1-1-1-1-1) Fall, Spring

Prerequisite: Consent of instructor. Advanced repertory and interpretive coaching for public performance, with consideration of materials selected from the different periods of musical composition.

446S-Z Advanced Organ Instruction (1-1-1-1-1-1-1) Fall, Spring

Prerequisite: Consent of instructor. Advanced repertory and interpretive coaching for public performance.

447W-X-Y-Z Accompanying (1-1-1-1) Fall, Spring

Prerequisite: Consent of instructor. Discussion and demonstration of particular problems of ensemble performance involving singers or instrumentalists and pianists; specific skills needed by an accompanist and coach; performance practice of vocal (concert and operatic repertoire) and instrumental music of the different style periods; playing for individuals or groups; treatment of recitatives; problems of transposing; practical experience and guidance by performance in class and recital.

460 Orchestration and Arranging (2) Spring

Prerequisite: Music 360 or equivalent. Survey of techniques necessary orchestrating compositions for a symphonic band and symphonic orchestra; special attention given to problems encountered in public school bands and orchestras.

461 Musical Form (2) Fall

Prerequisite: One year of harmony and musicianship or equivalent. Analytic techniques for the study of balance in the organization of musical material.

463 Intermediate Composition (2) Fall

Prerequisites: Music 260B, Music 360 or equivalent. Writing for small ensembles such as string quartet, woodwind quartet or quintet, or small vocal groups with and without instruments.

464 Contemporary Techniques (3) Spring

Study of the techniques used in contemporary composition and application to practical writing.

465 Vocal Arranging (2) Spring

Study of writing and arranging for vocal groups; problems in arranging for the usual school groups; girls' and boys' chorus and mixed chorus; creative arranging in the smaller vocal forms, with and without instrumental accompaniment.

472 History and Literature of Instrumental Music (3)

Fall, 1961

Prerequisite: Music 370B or equivalent. Study of instrumental music from the Baroque Period to the present; analysis and performance of representative works from the fields of orchestral, chamber, or keyboard literature.

477 History and Literature of Vocal Music (3) Spring, 1962

Prerequisite: Music 370B or equivalent. Study of vocal literature from the Baroque Period to the present; analysis and performance of representative works from the field of opera, the large choral forms, and the art song.

**478 The History and Literature of American Music (3)
Fall, 1962**

Prerequisite: Senior or graduate standing. Historical survey of music in the United States from early colonial times to the present. Emphasis on musical literature and the developments in composition, performance, music education, and instrument manufacture.

GRADUATE COURSES**500 Seminar in Elementary Music Education (3) Fall**

Prerequisite: Baccalaureate degree with a major in music education and at least one year of teaching experience. Study of the basic concepts in music education, their development, and their application to the musical activities in the elementary school.

**503A-B Seminar in Choral Music Education (3-3) A—Fall;
B—Spring**

Prerequisite: Education 493 MuB or equivalent. First semester emphasizes study of basic concepts in music education, their development, and application to choral music. Second semester concentrates upon the survey and interpretation chorus and vocal ensemble music suitable for public schools. Music selected will be performed and analyzed for aesthetic and educational values and interpretation.

**504A-B Seminar in Instrumental Music Education (3-3) A—Spring;
B—Fall**

Prerequisite: Education 493 MuA or equivalent. First semester emphasizes study of basic concepts in music education, their development, and application to instrumental music. Second semester concentrates upon the survey and the development of criteria for selection and interpretation of solo, ensemble, and large group instrumental music literature suitable for public schools.

506 School Music Administration and Supervision (3) Spring

Prerequisite: Graduate standing. Study of administrative and supervisory responsibilities of the music educator. Leadership in the areas of personal relations; curriculum; improving instruction; public relations; scheduling; budget and finance; equipment, materials and supplies; and space and housing.

**519W-X-Y-Z Individual Lessons on Instruments (1-1-1-1) Fall,
Spring**

On-campus, private lessons with approved instructors. Special fee.

520X-Y-Z Choral Techniques (1-1-1) Spring

Prerequisite: Graduate standing. A seminar devoted primarily to a collegium in the study and reading of less well-known music literature, plus concurrent participation in a choral organization. Analysis of literature and rehearsal techniques; study of special choral problems.

526X-Y-Z Instrumental Techniques (1-1-1) Fall

Prerequisite: Graduate standing. A seminar devoted primarily to a collegium in the study and reading of less well-known music literature, plus concurrent participation in an instrumental organization. Analysis of literature and rehearsal techniques; study of special instrumental problems.

539W-X-Y-Z Individual Lessons in Voice (1-1-1-1) Fall, Spring

Prerequisite: Consent of instructor. On-campus, private lessons with approved instructors. Special fee.

549W-X-Y-Z Individual Lessons on Piano or Organ (1-1-1-1) Fall, Spring

Prerequisite: Consent of instructor. On-campus, private lessons with approved instructors. Special fee.

560 Creative Arranging (2) Spring, 1962

Prerequisites: Music 360 and 460 or equivalent. Specialized work in arranging for ensembles including the symphonic band and standard symphony orchestra.

561 Seminar in Composition (3) Fall, 1962

Prerequisites: Graduate standing in music and consent of instructor. Clarification of the philosophies and aesthetic theories involved in contemporary music; compositional problems and projects of an advanced nature intended to synthesize previous creative skills and techniques.

563 Advanced Composition and Analysis (2) Fall, 1961

Prerequisite: Music 463 or equivalent. Free composition in all the vocal and instrumental forms.

570 Seminar in Musicology (3) Spring

Prerequisite: Graduate standing as a music major or equivalent musical background. Discussion of specific musicological problems in the wake of reports or papers prepared by individual students.

571 Music of the Baroque Period (3) Fall, 1962

Prerequisite: Graduate standing as a music major or equivalent musical background. Discussion of the stylistic characteristics of the music of the Baroque Period and formal, technical, and thematic score analysis of representative works played from recordings or in live performance.

572 Music of the Classic Period (3) Fall, 1961

Prerequisite: Graduate standing as a music major or equivalent musical background. Discussion of the stylistic characteristics of the music

of the Classic Period and formal, technical, and thematic score analysis of representative works played from recordings or in live performance.

573 Music of the Romantic Period (3) Spring, 1962

Prerequisite: Graduate standing as a music major or equivalent musical background. Discussion of the stylistic characteristics of the music of the Romantic Period and formal, technical, and thematic score analysis of representative works played from records or in live performance.

581 Advanced Choral Conducting (2) Spring

Prerequisites: Music 381 and Music 382 or equivalent.

582 Advanced Instrumental Conducting (2) Fall

Prerequisites: Music 381 and Music 382.

599A-B Graduate Project (1-2) Fall, Spring

Prerequisite: Graduate standing. 599A should be taken in the first semester of the student's graduate year. Study of basic bibliography, survey of literature, methods of research in music and music education, and practice in organizing and reporting data both oral and written. A tentative proposal for the graduate project will be developed. The project may be a performance, a creative work, or a research report. 599B should be taken in the final semester of the student's program. The project will be completed under the guidance of an advisory committee.

NURSING

(In the Division of Technical Sciences)

STAFF: Malkin (Department Head), Aiello, Blackwell, Bowman, Greiner, Johnson, King, Mote, Ory, Wendtland.

The Department of Nursing offers two programs designed to meet increasing needs for the services of professional nurses in hospitals, public health agencies, homes, school systems, and industries: (1) Basic program for students in nursing, and (2) General Nursing program for Registered Nurses.

BACHELOR'S DEGREE CURRICULA

General Requirements

1. Students planning to enter either nursing program must be advised by the faculty of the Department of Nursing.
2. Students wishing to enroll in a clinical laboratory course (201, 205, 219, 220, 306, 313, 315, 319, 320) must register with the Department of Nursing by June 15th for the fall semester and November 15th for the spring semester.
3. All students must have completed, by the end of their second semester in college and/or prior to enrolling in courses in nursing, Education 300 (which includes a special health examination).
4. Students are required to have accident and sickness medical insurance. For information regarding insurance available to students see department head.

Basic Program in Nursing

This program leading to the bachelor of science degree in nursing has been accredited by the California State Board of Nurse Examiners. It is designed to prepare high school graduates for professional nursing services in hospitals, public health agencies, homes, school systems, and industries.

Students must fulfill the General Requirements as stated on page 298 and complete 132 units including the following courses:

Lower Division

Anatomy 201—Structure of the Human Body	3 units
Physiology 201—Introduction to Human Physiology	3 units
Microbiology 200—General Microbiology	5 units
Chemistry 100AB—Fundamentals of Chemistry	6 units
Nursing 201—Fundamentals of Nursing	4 units
Nursing 219—Medical-Surgical Nursing I <i>or</i>	
Nursing 220—Maternal-Child Health I	7 units
Home. Econ. 210—Food Preparation and Nutrition	4 units

Upper Division

Education 413—Psychological and Sociological Foundations of Education	5 units
Public Health 313—Public Health Administration	3 units
Nursing 219—Medical-Surgical Nursing I <i>or</i>	
Nursing 220—Maternal-Child Health I	7 units

Nursing 315—Psychiatric Nursing II	8 units
Nursing 302—Survey of Nursing	3 units
Nursing 306—Community Health Nursing	8 units
Nursing 303—Behavioral Patterns in Illness	2 units
Nursing 319—Medical-Surgical Nursing II	6 units
Nursing 320—Maternal-Child Health II	6 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR NURSING MAJOR

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
*Engl. 150—Written Expr. <i>or</i>		Physio. 201—Physiology	3
Lang. Arts 150A	3	Chem. 100A—Fund. of Chem.	3
P.E. 150	1	Anthro. 250—Cultural Anthro.	3
Psych. 150—Human Behavior	3	*Sp. 150—Oral Expr. <i>or</i>	
Anat. 201—Anatomy	3	Lang. Arts 150B	3
Soc. 250—Man & Society	3	Gen. Educ. electives	5
Phys. Sci. 151	3		

SOPHOMORE YEAR

Educ. 300—Intro. to Cred. Prog. NC		Phys. Educ. elective	1
Phil. 150—Phil. Ideas	3	Nurs. 303—Behav. Patterns	2
Engl. 250—Understanding Lit.	3	Nurs. 201—Fund. of Nursing	4
H. Ec. 210—Nutrition	4	Micro. 200—Gen. Micro.	5
Chem. 100B—Fund. of Chem.	3	Art 150—Art, Music, Dance	3
Govt. 150—Govt. & Amer. Soc.	3	Electives	3

JUNIOR YEAR

Nurs. 219—Med.-Surg. Nurs. I <i>or</i>		Nurs. 219—Med.-Surg. Nurs. I <i>or</i>	
Nurs. 220—Mat.-Child Hlth. I	7	Nurs. 220—Mat.-Child Hlth. I	7
Educ. 413—Psych. & Soc.	5	Publ. Hlth. 313—Publ. Hlth. Adm.	3
Hist. 250—U.S. History	3	Electives	7
Elective	2		

SENIOR YEAR

Nurs. 306—Prin. of Nurs. in		Nurs. 319—Med.-Surg. Nurs. II ..	6
the Community	8	Nurs. 320—Mat.-Child Hlth. II ..	6
Nurs. 315—Psych. Nurs. II	8	Nurs. 302—Survey of Nursing	3

Program for Registered Nurses

Students must fulfill the General Requirements as stated on page 298 and shall have taken the NLN Graduate Nurse Examination prior to admission or within the first year of enrollment in the college.

A total of 132 units must be completed to qualify for graduation with a bachelor of science in nursing. A nurse who has graduated from an accredited school of nursing and is currently registered in the State of California may be granted 33-36 † units toward the baccalaureate degree. A summary of the requirements follow:

1. Credit for R.N. in nursing granted by an accredited school of nursing (including Psychiatric Nursing) † 36 units
2. Required General Education 45 units

* See "Note" on page 61.

† Students who have not successfully completed a clinical laboratory experience in psychiatric nursing in a setting specifically designed for psychiatric care will be granted 33 units and will be required to take Nursing 205—Psychiatric Nursing I (3). Final evaluation of unit value for previous psychiatric nursing experience will be determined by the faculty of the Department of Nursing.

3. Prerequisites to the nursing major	11 units
Education 413—Psychological and Sociological Foundations of Education (5)	
Sociology 440—Marriage and the Family (3)	
Nursing 302—Survey of Nursing (3)	
4. Required in Nursing at Los Angeles State College	21 units
Nursing 303—Behavioral Patterns in Illness and Health (2)	
Nursing 304—Effective Relationships in Nursing (2)	
Nursing 306—Principles and Practices of Nursing in the Community (8)	
Nursing 313—Clinical Seminar in Nursing (6)	
5. Required Related Subjects	5 units
Education 493 N—Methods of Teaching in Nursing (2)	
Public Health 313—Public Health Administration (3)	
6. Electives	17 units
	132 units

Health and Development Credential for the School Nurse ‡

Students must complete 36 units of required courses as a part of the qualifications for the health and development credential. Students interested in obtaining this credential should seek early advisement from the Department of Nursing.

COURSES OF INSTRUCTION

Students must register with adviser for Nursing 201, 205, 219, 220, 306, 313, 319, and 320 by the middle of the semester prior to registration.

101 Home Nursing (2) Spring

Designed for Home Economics majors to provide theory and laboratory practice in the home care of the sick and injured. Lecture 1 hour; laboratory 3 hours per week.

201 Fundamentals of Nursing (4) Spring

Prerequisite: Consent of instructor.

Beginning course to develop skills in nurse-patient relationships, and physical nursing care of hospitalized patients. Lecture two hours; laboratory six hours.

205 Psychiatric Nursing I (3) Fall

Prerequisite: Consent of instructor.

Provides opportunity for the registered nurse to develop skill in the application of current accepted theories in psychiatric nursing; exploration and study of community resources available for the treatment of emotional disorders. Lecture 1 hour; laboratory 6 hours per week.

‡ Students should apply directly to State Department of Education for evaluation of education preparation and issuance of credential.

219 Medical-Surgical Nursing I (7) Fall, Spring

Prerequisites: Nursing 201, 303 and consent of instructor.

Develops ability to provide comprehensive nursing care to medical-surgical patients. Lecture 2 hours; laboratory 15 hours.

220 Maternal-Child Health I (7) Fall, Spring

Prerequisites: Nursing 201, 303 and consent of instructor.

Beginning course in maternal and child care with emphasis on the nurse's role in the satisfaction of the health needs of the parents and new baby. Lecture 2 hours; laboratory 15 hours.

302 Survey of Nursing (3) Fall, Spring

Critical analysis of studies in nursing and their relationship to the development of the profession; current trends in nursing education and practice.

303 Behavioral Patterns in Illness and Health (2) Fall, Spring

Prerequisite: Consent of instructor.

Provides an understanding of human behavior in the hospital setting; emphasis on the interrelatedness of physical, emotional, and social health.

304 Effective Relationships in Nursing (2) Fall, Spring

Prerequisite: Consent of instructor.

Professional relationships in nursing, including patient-nurse, family-nurse, medical and nursing team relationships, interdepartmental relationships.

306 Principles and Practices of Nursing in the Community (8) Fall, Spring

Prerequisites: Preregistration and consent of instructor. Provides the nursing student with theory and concurrent laboratory experience in schools, industry, and community health agencies; emphasis on philosophy of positive health, and skills in preventive and promotional procedures. Lecture 4 hours; laboratory 12 hours.

313 Clinical Nursing Seminar (6) Fall, Spring

Prerequisite: All courses in the nursing major must be completed prior to, or concurrently with, Nursing 313. Clinical practice for registered nurses in maternal-child health, medical-surgical and psychiatric nursing; seminar study of problems and practices common to all clinical areas. Lecture two hours; laboratory 12 hours.

314 Principles and Practices of Public School Nursing (4) Fall, Spring

Prerequisite: Consent of instructor.

Practical application of basic principles, functions, techniques, and methods of public school nursing in California. Lecture 3 hours; laboratory to be arranged: 5 consecutive days for nurses not currently employed in School Nursing; others—special project.

315 Psychiatric Nursing II (8) 1962-63

Prerequisites: Nursing 201, 219, 220, and 303.

Clinical course for the student in Basic Nursing Program. Develops skills in the application of current accepted theories in psychiatric nursing; use of available community resources; study of needs and treatment of psychiatric patient and family. Lecture 3 hours; laboratory 15 hours.

319 Medical-Surgical Nursing II (6) 1962-63

Prerequisites: Nursing 201, 219, 220, 306, and 315.

Second level clinical course for students in Basic Nursing Program. Provides experience in administering care to neuro-surgical patients and patients undergoing radical surgery. Beginning experience in unit management. Lecture 2 hours; laboratory 12 hours.

320 Maternal-Child Health II (6) 1962-63

Prerequisites: Nursing 201, 219, 220, 306, and 315.

Second level clinical course for students in the Basic Nursing Program. Includes care of sick, hospitalized child; general ward functions of registered nurse such as supervising nurses' aides, and experience in clinics, nursery, and public schools. Lecture 3 hours; laboratory 9 hours.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Consent of instructor.

Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

PHILOSOPHY

(In the Division of Social Sciences)

STAFF: Albert (Department Head), Alexander, Bowman, Sayles, J. Wilson, Zimmerman.

BACHELOR'S DEGREE CURRICULUM

Major in Philosophy

The program leading to the bachelor of arts degree in philosophy has been designed with three aims in view. It seeks to develop in the student: an effective understanding of principles of inquiry and evaluation; skills of criticism and synthesis necessary for advanced work in any scholarly field; and an acquaintance with the noteworthy contributions made by philosophers to the intellectual traditions of mankind.

This program has been oriented to the needs of three groups of students: those who plan advanced work in philosophy; those who wish to pursue advanced work in other fields where philosophical training is valuable, notably in law and theology; and those who seek a strong liberal arts preparation.

Note that students majoring in philosophy do not take Philosophy 150 as part of their general education requirements (see page 63).

Lower Division

Philosophy 210—Types and Problems.....	3 units
Philosophy 250—Logic	3 units

Upper Division

Philosophy 304—Ethics	3 units
Philosophy 320—History of Ancient and Medieval Philosophy.....	3 units
Philosophy 321—History of Modern Philosophy.....	3 units
Philosophy 499—Independent Study	3 units
Select 18 units with consent of adviser.....	18 units
Philosophy 238—Comparative Religions (3)	
Philosophy 340—Symbolic Logic (3)	
Philosophy 425—Philosophy of History (3)	
Philosophy 430—American Philosophy (3)	
Philosophy 440—Contemporary Philosophy (3)	
Philosophy 460—Metaphysics (3)	
Philosophy 470—Theory of Knowledge (3)	
Philosophy 475—Aesthetics (3)	
Philosophy 485—Philosophy of Science (3)	
Philosophy 490—Philosophy of Law (3)	

Comprehensive examination in the field of philosophy, administered by the Department of Philosophy.

COURSES OF INSTRUCTION**150 Philosophical Ideas (3) (General Education)**

Major issues of philosophical interest with special attention to the principal intellectual techniques employed by philosophers, both critical and speculative.

210 Types and Problems (3)

An introduction to philosophy, stressing major philosophical problems and their resolutions within traditional philosophical positions.

238 Comparative Religions (3)

Comparative study of the world's living religions: Buddhism, Confucianism, Judaism, Christianity, Islamism, and others. Concepts of deity, the immortality of the soul, methods of salvation, and the influence of environment and culture upon these beliefs.

250 Logic (3) (General Education)

Analysis and criticism of inductive and deductive reasoning. Study of definition, verification, evidence, validity, truth, and fallacious argument in all areas of inquiry.

304 Ethics (3)

Prerequisite: Philosophy 150 or equivalent or consent of the instructor. Analysis of the empirical and normative factors involved in choice. Types of ethical theory. Nature of moral standards and judgments.

320 History of Ancient and Medieval Philosophy (3)

Prerequisite: Philosophy 150 or equivalent or consent of instructor. Development of philosophical thought from the Ancient Greek to the end of the Medieval period. Study of principal thinkers, major problems, and dominant trends in Western thought.

321 History of Modern Philosophy (3)

Prerequisite: Philosophy 150 or equivalent or consent of instructor. Development of philosophical thought from the medieval period to the present time. Study of principal thinkers, major problems and dominant trends in Western thought.

340 Symbolic Logic (3)

Prerequisite: Philosophy 250 or equivalent. Logic and language; the nature of argument; meaning and truth; the propositional calculus and the lower functional calculus; logic of classes; the foundations of mathematics.

425 Philosophy of History (3)

Prerequisite: Philosophy 150 or equivalent and a college level history course. A philosophical study of western historical writing and thought; the nature of historical knowledge; historical explanation; history and values; the meaning of history.

430 American Philosophy (3)

Prerequisite: Philosophy 150 or equivalent or consent of instructor. Major movements of thought and principal thinkers in America from colonial times to the twentieth century. The relationships of American philosophy to European intellectual currents. The influence and bearings of dominant doctrines on American life and outlook.

440 Contemporary Philosophy (3)

Prerequisite: Philosophy 150 or equivalent or consent of instructor. Major problems and trends in twentieth century philosophy.

460 Metaphysics (3)

Prerequisite: Philosophy 150 or equivalent or consent of instructor. Critical examination of fundamental principles, and their implications, in various fields of knowledge, including philosophy itself; and of basic assumptions implicit in certain human activities, such as art or religion.

470 Theory of Knowledge (3)

Prerequisite: Philosophy 150 or equivalent or consent of instructor. An analysis of how we know, and how we know we know; theories of evidence, truth and confirmation.

475 Aesthetics (3)

Prerequisite: Philosophy 150 or equivalent or consent of instructor. Main problems and principal theories of art creation, appreciation, and criticism. Aesthetic experience and the work of art; principles of aesthetic evaluation and their bearings on morality, government, society, science, and philosophy.

485 Philosophy of Science (3)

Prerequisite: General Education Science requirements or consent of instructor. A study of philosophical issues in the physical, life, and social sciences. Problems selected for study may include: concept formation; hypotheses and models; meaning and verification; prediction; explanation; causality and natural law.

490 Philosophy of Law (3)

Prerequisite: Philosophy 150 or equivalent or consent of instructor. Philosophical investigation of the fundamental presuppositions of legal theory. Analysis of basic legal concepts.

499 Independent Study (3)

Prerequisite: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

PHOTOGRAPHY

(In the Department of Industrial Arts)
Division of Technical Sciences

STAFF: Dobson (Department Head), Haithwaite (Adviser). *Part-time*: Todd.
See Industrial Arts Section, page 247.

PHYSICAL EDUCATION

(In the Division of Health and Safety, Physical Education,
Recreation, and Athletics)

STAFF: Wise (Department Head), Adams, Bell, Cake, Crakes, Day, Deeds, Dunkelberg, (Co-ordinator for men), Ellena, Ennen, Faurot, Fisher, Glander, Gunnell, Hoyt, J. Johnson, W. Johnson, Maddux, Mochel, Morris, Nilsen, Outland, Powell, Reeder, Reeves, Strehle, Wright, Wroblicky, Yerrington (Co-ordinator for women).

BACHELOR'S DEGREE CURRICULA

Major in Physical Education

Ordinarily, physical education is offered as a teaching major. Students wishing to qualify for a bachelor's degree in this field should follow the requirements listed below for the special secondary teaching major.

Special Secondary Teaching Major

The major in physical education for a special secondary teaching credential is designed for those who expect to teach physical education in the public secondary schools. This credential authorizes the holder to teach physical education in elementary and secondary schools in California. This major might also be followed by students wishing to qualify for positions other than public school teaching.

Lower Division

Anatomy 201—Structure of the Human Body	3 units
Physiology 201—Introduction to Human Physiology	3 units
P.E. 180—Professional Activities I	2 units
P.E. 181—Professional Activities II	2 units
P.E. 280—Professional Activities III	2 units
P.E. 281—Professional Activities IV	2 units
P.E. 295—Water Safety	1 unit
H&S 201—First Aid	1 unit

Upper Division

P.E. 406—Methods of Teaching Individual Sports	2 units
P.E. 425—Principles of Physical Education	2 units
P.E. 431—Kinesiology	3 units
P.E. 432—Corrective Physical Education	2 units
P.E. 433—Physiology of Activity	3 units

P.E. 434—Prevention and Care of Athletic Injuries (required for men only)	2 units
P.E. 444—Organization and Administration of Physical Education and Athletics	2 units
H&S 460—School Health Education	3 units
Women select four to five courses from the following	8 units
Men select three to five courses from the following	6 units
P.E. 401—Methods of Teaching Square and Round Dance (2)	
P.E. 402—Methods of Teaching Modern Dance (2)	
P.E. 403—Methods of Teaching Social Dance (2)	
P.E. 404fs—Methods of Teaching Team Sports for Women I (2)	
P.E. 404ss—Methods of Teaching Team Sports for Women II (2)	
P.E. 407—Methods of Coaching Football (2)	
P.E. 408—Methods of Coaching Basketball (2)	
P.E. 409—Methods of Coaching Tennis and Swimming (2)	
P.E. 410—Methods of Coaching Track and Field (2)	
P.E. 411—Methods of Coaching Baseball (2)	
Physical Education 460—School Camping and Outdoor Education <i>or</i>	
Recreation Education course approved by adviser	2 units
	43 units

NOTE: All transfer students who do not take Physical Education 180, 181, 280, and 281 are required to complete successfully the department skills test. This test must be completed prior to directed teaching in physical education.

SUGGESTED COURSE SEQUENCE FOR PHYSICAL EDUCATION MAJOR WITH SPECIAL SECONDARY CREDENTIAL

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
P.E. 180—Prof. Activities I	2	P.E. 181—Prof. Activities II	2
Biol. Sci. 153—Prin. of Biology	3	Biol. Sci. 154—Prin. of Biology II	
Phys. Sci. 151—Prin. of Phys. Sci.	3	<i>or</i>	
†Engl. 150—Written Expr. <i>or</i>		Phys. Sci. 152	3
Lang. Arts 150A	3	Govt. 150—Govt. and Amer. Soc.	3
Electives	5	†Sp. 150—Oral Expr. <i>or</i>	
		Lang. Arts 150B	3
		Gen. Educ. Soc. Sci. elective	3
		Elective	2

SOPHOMORE YEAR

P.E. 280—Prof. Activities III	2	P.E. 281—Prof. Activities IV	2
Anat. 201—Struc. Human Body	3	Physio. 201—Intro. Human Physiol.	3
P.E. 295—Water Safety	1	Engl. 250—Understanding Lit.	3
Hist. 250—U. S. History	3	Art 150—Art, Music, Dance	3
Phil. 150—Phil. Ideas	3	*Phil. 250—Logic	3
Psych. 150—Human Behavior	3	Elective	2

* Or elective in General Education.

† See "Note" on page 61.

JUNIOR YEAR			
<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
P.E. 406—Methods of Teaching		P.E. 433—Physiol. of Activity.....	3
Indiv. Sports	2	P.E. 401, 402, 403, or 409—Methods	
P.E. 431—Kinesiology	3	Course (Women) <i>or</i>	
P.E. 425—Prin. of Phys. Educ.....	2	P.E. 401, 403, 409, 410, or 411—	
P.E. 401, 403, or 404—Methods		Methods Course (Men).....	2
Course (Women) <i>or</i>		Educ. 493—Methods	2
P.E. 401, 403, 407, or 408—Methods		Educ. 471—Sec. Educ.....	5
Course (Men)	2	H&S 350—Personal Health	2
Educ. 300—Intro. Cred. Prog.	N.Cr.		
Educ. 413—Psych. and Soc.	5		
H&S 201—First Aid	1		

SENIOR YEAR			
P.E. 432—Adapted P.E.	2	P.E. 444—Org. and Admin. of P.E.	
P.E. 401, 403, or 404—Methods		& Athl.	2
Course (Women) <i>or</i>		Educ. 443Z—Directed Teaching...	3
P.E. 401, 403, 407, or 408—Methods		Educ. 444Z—Prob. in Sec. Tchng.	2
Course (Men)	2	Educ. 490—Audio-Visual	2
Educ. 443Y—Directed Teaching...	3	H&S 460—School Health Educ.....	3
Educ. 444Y—Prob. in Sec. Tchng.	1	P.E. 434—Prev. and Care of	
Hist. 450—Senior Colloquium	3	Ath. Inj. (Men only).....	2
P.E. 418—Spts. Officiating for		Electives (Men)	1
Women <i>or</i>		Electives (Women)	3
P.E. 417—Spts. Officiating for Men	2		
P.E. 460—School Camping <i>or</i>			
Rec. Ed. course approved by			
adviser	2		

General Secondary Teaching Major

The general secondary credential is a five-year program requiring at least 30 units beyond the bachelor's degree. The department's requirements for the general secondary teaching credential with a major in physical education are the same as those for the special secondary credential. In addition, a teaching minor is required in another field.

SUGGESTED COURSE SEQUENCE FOR PHYSICAL EDUCATION MAJOR WITH GENERAL SECONDARY CREDENTIAL

FRESHMAN YEAR			
<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
P.E. 180—Prof. Activities I.....	2	P.E. 181—Prof. Activities II.....	2
Biol. Sci. 153—Prin. of Biol. I.....	3	Biol. Sci. 154—Prin. of Biol. II.....	3
Phys. Sci. 151—Prin. of Phys. Sci. I	3	*Sp. 150—Oral Expr. <i>or</i>	
*Engl. 150—Writ. Expr. <i>or</i>		Lang. Arts 150B.....	3
Lang. Arts 150A	3	Minor	2
Elective	5	Govt. 150—Govt. and Amer. Soc.	3
		Gen. Educ. Soc. Sci. Elective	3

* See "Note" on page 61.

SOPHOMORE YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
P.E. 280—Prof. Activities III.....	2	P.E. 281—Prof. Activities IV.....	2
Anat. 201—Struc. Human Body.....	3	Physio. 201—Intro. Human Physio.	3
P.E. 295—Water Safety.....	1	Engl. 250—Understanding Lit.....	3
Hist. 250—U. S. History.....	3	Art 150—Art, Music, Dance.....	3
Phil. 150—Phil. Ideas.....	3	Phil. 250—Logic.....	3
Psych. 150—Human Behavior.....	3	Elective.....	2

JUNIOR YEAR

P.E. 406—Methods Ind. Sports.....	2	P.E. 433—Physiol. of Activity.....	3
P.E. 431—Kinesiology.....	3	P.E. 401, 402, 403, or 409—	
P.E. 425—Prin. of Phys. Educ.....	2	Methods Course (Women) <i>or</i>	
P.E. 401, 403, or 404—Methods		P.E. 401, 403, 409, 410, or 411—	
Course (Women) <i>or</i>		Methods Course (Men).....	2
P.E. 401, 403, 407, or 408—		Educ. 471—Sec. Educ.....	5
Methods Course (Men).....	2	H&S 350—Personal Health.....	2
Educ. 300—Intro. Cred. Prog.....	N.cr.	Minor.....	4
Educ. 413—Psych. and Soc.....	5		
H&S 201—First Aid.....	1		

SENIOR YEAR

P.E. 432—Adapted Phys. Educ.....	2	P.E. 444—Org. & Adm. of P.E. &	
P.E. 401-403 or 404—Methods		Athl.....	2
Course (Women) <i>or</i>		H&S 460—School Health Educ.....	3
P.E. 401, 403, 407 or 408 Methods		Ed. 442YZ—Directed Teaching.....	3
Course (Men).....	2	Ed. 444YZ—Prob. in Sec. Tchng..	1
P.E. 418—Sports Officiating for		Ed. 490—Audio-Visual Instruction	2
Women <i>or</i>		Ed. 493—Methods (Minor).....	2
P.E. 417—Sports Officiating for		Elective.....	2
Men.....	2		
Educ. 493—P.E.—Methods (Major)	2		
Hist. 450—Senior Colloquium.....	3		
Minor.....	2		
P.E. 460—School Camping <i>or</i>			
Rec. Ed. course approved by			
adviser.....	2		

GRADUATE YEAR

Educ. 442YZ—Directed Teaching..	3	P.E. 501—Tests & Meas. Phys. Ed.	2
Educ. 444YZ—Prob. in Sec. Tchng.	2	P.E. 522—Seminar.....	3
Minor.....	4	P.E. 599AB—Graduate Project.....	3
Educ. 480—Fund. Counsel & Guid.	2	Minor.....	4
P.E. 545—Program Planning in		Elective.....	3
Physical Education.....	2		
Elective.....	2		

General Secondary Teaching Minor

The teaching minor in physical education is designed for students who plan to teach in the secondary schools with a general secondary credential. A teaching major and a graduate year including additional professional education are required for this credential.

Lower Division

P.E. 180—Professional Activities I	2 units
P.E. 181—Professional Activities II	2 units
P.E. 280—Professional Activities III	2 units
P.E. 281—Professional Activities IV	2 units
Anatomy 201—Struc. Human Body <i>or</i>	
Physio. 201—Intro. Human Physio.	3 units

Upper Division

Select at least <i>one</i> course from the following	2 units
P.E. 401—Methods of Teaching Square and Round Dance (2)	
P.E. 402—Methods of Teaching Modern Dance (2)	
P.E. 403—Methods of Teaching Social Dance (2)	
P.E. 404fs—Methods of Teaching Team Sports for Women I (2)	
P.E. 404ss—Methods of Teaching Team Sports for Women II (2)	
P.E. 407—Methods of Coaching Football (2)	
P.E. 408—Methods of Coaching Basketball (2)	
P.E. 409—Methods of Coaching Tennis and Swimming (2)	
P.E. 410—Methods of Coaching Track and Field (2)	
P.E. 411—Methods of Coaching Baseball (2)	
Select at least <i>one</i> course from the following:	2-3 units
P.E. 431—Kinesiology (2)	
P.E. 432—Corrective Physical Education (2)	
P.E. 433—Physiology of Activity (3)	
P.E. 434—Prevention and Care of Athletic Injuries (2)	
Select P.E. 460—School Camping and Outdoor Education (2) <i>or</i>	
a recreation education course approved by adviser	2 units
Select at least 5 units of additional courses in physical education with	
approval of adviser	5 units
	22 units

MASTER OF ARTS DEGREE

The master of arts degree program is designed to give teachers and administrators of physical education experience in analyzing critically the problems in testing, programming, administering, and teaching the physical education program in the secondary schools. It attempts to add depth to the professional preparation of leaders in this field and serves as a basis for further study.

Prerequisite: Acceptable undergraduate preparation in the field of physical education.

- Required courses:

P.E. 501—Tests and Measurements in Physical Education	2 units
P.E. 522—Seminar in Current Problems in Physical Education	3 units
- P.E. 599A-B and/or other 500 level courses in physical education
- Additional upper division or graduate courses within the Division of Health and Safety, Physical Education, Recreation and Athletics
- Courses outside the Division of Health and Safety, Physical Education, Recreation and Athletics
- Electives
- The comprehensive examination required of all candidates who do not take P.E. 599A-B.

 30 units

COURSES OF INSTRUCTION**LOWER DIVISION****GENERAL EDUCATION**

Courses of instruction listed 150-155, 251-254, and 351-354 satisfy the general education requirement in this area. Physical Education 150 is prerequisite to the other general education courses in physical education. Transfer students who have completed at least one unit of physical education should not enroll in Physical Education 150 but should elect from the other general education activities. All other students must register in Physical Education 150 for their first experience in the general education program. The second semester course may be selected from the available activities. Two units are required and up to four units may be applied toward the total general education requirement. A maximum of eight units in physical education activities may be counted for graduation credit.

150 Fundamentals of Physical Education (1) Fall, Spring

Testing program in the four areas of individual activities, team sports, aquatics, and dance. Instruction in an activity according to the student's need.

155W-X-Y-Z Adapted Physical Education (1-1-1-1) Fall, Spring

Prerequisite: Consent of instructor. Individual program of corrective exercise and adapted sports activities for the atypical student. Assignment to this program is made through the co-operation of the school physician.

Individual Activities

Courses numbered 151 are activities of an individual and dual nature designed to develop skill, knowledge of rules, background, analysis of techniques, and desirable attitudes toward participation. Prerequisite: P.E. 150.

151a Archery (1) Fall, Spring**151b Badminton (1) Fall, Spring****151d (W) Body Dynamics (1) Fall, Spring****151f Fencing (1) Fall, Spring****151g Golf (1) Fall, Spring****151gt Gymnastics and Tumbling (1) Fall, Spring****151h Handball (1) Fall, Spring****151t Tennis (1) Fall, Spring****151w (M) Wrestling (1) Fall, Spring****Team Sports**

Courses numbered 152 are activities of a team nature designed to develop skill, knowledge of rules, background, analysis of techniques, and desirable attitudes toward participation. Prerequisite: P.E. 150.

- 152bv (M) (W) **Basketball-Volleyball** (1) Fall, Spring
152f (W) **Field Sports for Women** (1) Fall, Spring
152s (M) (W) **Softball** (1) Fall, Spring
152ss (M) **Soccer-Speedball** (1) Fall, Spring
152tf (M) **Touch Football** (1) Fall, Spring

Aquatics

Courses numbered 153 and 253 are water activities designed to develop skill, background, knowledge, ability of analysis of techniques, safety skills, and desirable attitudes toward water activities. Prerequisite: P.E. 150.

- 153s **Beginning Swimming** (1) Fall, Spring
253s **Intermediate Swimming** (1) Fall, Spring

Dance

Courses numbered 154 and 254 are dance activities designed to develop skill, background knowledge, ability of analysis, and desirable attitudes toward the dance. Prerequisite: P.E. 150.

- 154m **Beginning Modern Dance** (1) Fall, Spring
154s **Social Dance** (1) Fall, Spring
154sr **Square and Round Dance** (1) Fall, Spring
254m **Intermediate Modern Dance** (1) Fall, Spring

Intercollegiate Athletics

Students must obtain consent of the coach to register for intercollegiate athletics. The student athlete must complete Physical Education 150. Other units earned in intercollegiate athletics may be counted toward the general education requirement for graduation.

- 200 **Football** (1) Fall, Spring
201 **Basketball** (1) Fall, Spring
202 **Water Polo** (1) Fall
203 **Cross Country** (1) Fall
204 **Wrestling** (1) Fall
205 **Bowling** (1) Fall
206 **Baseball** (1) Fall, Spring
207 **Track and Field** (1) Fall, Spring
208 **Golf** (1) Spring
209 **Tennis** (1) Spring
210 **Swimming** (1) Spring
211 **Gymnastics and Tumbling** (1) Spring

PROFESSIONAL PHYSICAL EDUCATION**180 (M) (W) Professional Activities I (2) Fall**

For physical education majors and minors. Analyzing, demonstrating, practicing and evaluating the skills involved in the activities of: (for women) soccer, speedball, speed-a-way, hockey, calisthenics, marching, stunts and tumbling, badminton, handball, games and relays; (for men) football, speedball, soccer, badminton, handball, games and relays.

181 (M) (W) Professional Activities II (2) Spring

For physical education majors and minors. Analyzing, demonstrating, practicing, and evaluating the skills involved in the activities of: (for women) modern dance and aquatics; (for men) aquatics, hand to hand, apparatus, body dynamics, jujitsu, wrestling, boxing, calisthenics, marching, stunts and tumbling.

199 History and Development of Physical Education (2) Fall

History, development and background of school physical education programs.

280 (M) (W) Professional Activities III (2) Fall

For physical education majors and minors. Analyzing, demonstrating, practicing and evaluating the skills involved in the activities of: (for women) archery, tennis, golf, modern dance; (for men) archery, tennis, golf, basketball, volleyball.

281 (M) (W) Professional Activities IV (2) Spring

For physical education majors and minors. Analyzing, demonstrating, practicing, and evaluating the skills involved in the activities of: (for women) folk dance, square and round dance, and social dance, softball, basketball, volleyball; (for men) folk dance, square and round dance, and social dance, baseball, track and field.

295 Water Safety (1) Fall, Spring

Red Cross senior lifesaving.

UPPER DIVISION**General Education**

Advanced courses in physical education activities for general education are listed 351-354. These courses are designed for the advanced student in each activity.

351b Advanced Badminton (1) Fall, Spring

Prerequisite: P.E. 150.

351g Advanced Golf (1) Fall, Spring

Prerequisite: P.E. 150.

351ga Advanced Gymnastics and Apparatus (1) Fall, Spring

Prerequisite: P.E. 150.

351t Advanced Tennis (1) Fall, Spring

Prerequisite: P.E. 150.

353as Advanced Aquatic Sports

Prerequisite: P.E. 150.

353rs Rhythmic Swimming (1) Fall, Spring

Prerequisite: P.E. 150.

354m Advanced Modern Dance (1) Fall, Spring

Prerequisite: P.E. 150.

Professional Physical Education**336 Basic Dance Skills (1) Fall, Spring**

Survey, analysis, and practice of fundamental dance skills for modern, square and round, folk, and social dance.

337 Dual and Individual Sports (1) Spring

Practice in advanced performance techniques and analyzing procedures for various individual and dual activities. Selection of activities dependent on needs of students enrolled.

338 (M) (W) Team Sports (1) Fall

Practice in advanced performance techniques and analyzing procedures for various team sports. Selection of activities dependent on needs of students enrolled.

398 Work-Study Assignments and Reports * (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

401 Methods of Teaching Square and Round Dance (2) Fall

Techniques and materials for teaching and calling square and round dances.

402 Methods of Teaching Modern Dance (2) Spring

Prerequisite: Elementary modern dance, or consent of instructor. Techniques and organization of teaching modern dance in the elementary and secondary schools; history, philosophy, principles, composition.

403 Methods of Teaching Social Dance (2) Fall

Techniques and materials for teaching the basic steps of the waltz, fox trot, tango, samba, and other current popular dances.

404fs Methods of Teaching Team Sports for Women I (2) Fall

Prerequisites: Hockey, soccer, speedball, speedaway activity or consent of instructor. Techniques and organization of teaching hockey, soccer, speedball, and speedaway in the secondary schools.

* Eight units is the maximum number permitted in 496 or a combination of 496 and 398. No more than four units may be earned in any one activity. 496 and 398 may not be taken concurrently.

404ss Methods of Teaching Team Sports for Women II (2)
Spring

Prerequisites: Volleyball, basketball, softball activity or consent of instructor. Techniques and organization of teaching volleyball, basketball, and softball in the secondary schools.

405 Methods of Teaching Water Safety (2) Spring

Prerequisite: Current Red Cross certificate in senior lifesaving. American Red Cross course which qualifies instructors in water safety.

406 Methods of Teaching Individual Sports (2) Fall, Spring

Prerequisite: Individual and dual sports activity, including gymnastics and tumbling, or consent of instructor. Techniques of teaching individual and dual sports; methods of organizing such instruction.

407 Methods of Coaching Football (2) Fall, Spring

Prerequisite: Football activity, or consent of instructor. Techniques of coaching, organization of practice; handling of players; principles of competition; systems of offense and defense; purchase and care of equipment.

408 Methods of Coaching Basketball (2) Fall, Spring

Prerequisite: Basketball activity or consent of instructor. Techniques of coaching, organization of practice; handling of players; principles of competition; systems of offense and defense; purchase and care of equipment.

409 Methods of Coaching Tennis and Swimming (2) Spring

Prerequisites: Tennis and swimming activity or consent of instructor. Problems involved in coaching tennis and swimming; methods of coaching skills and techniques of competitive tennis and swimming; laboratory practice.

410 Methods of Coaching Track and Field (2) Spring

Prerequisites: Track and field activity or consent of instructor. Problems involved in coaching track and field; methods of coaching skills and techniques, track, and field events, laboratory practice.

411 Methods of Coaching Baseball (2) Spring

Prerequisite: Baseball or softball activity or consent of instructor. Problems involved in coaching baseball; methods of coaching skills and techniques of baseball; laboratory practice

417(M) Sports Officiating for Men (2) Fall, Spring

Problems and techniques of officiating various sports for boys and men.

418(W) Sports Officiating for Women (2) Spring

Prerequisites: Physical Education 404, 406, and 409, or consent of instructor. Problems, techniques, and practice in officiating various sports for girls and women. Leads to local and national officials ratings.

420 Physical Education in Elementary Schools (3) Fall, Spring

Physical education in the elementary schools; program organization and activities.

425 Principles of Physical Education (2) Fall, Spring

Problems, issues, and controversies in the field of physical education; exploration of current practices and ideas.

431 Kinesiology (3) Fall, Spring

Prerequisite: Anatomy 201. Analysis of joint and muscular action in relation to movement; application of the basic principles of mechanics to efficiency of performance in a variety of selected physical education activities.

432 Adapted Physical Education (2) Fall, Spring

Prerequisite: Anatomy 201. Administration of group and individual exercises for the prevention and correction of various functional disorders and structural defects; laboratory practices.

433 Physiology of Activity (3) Fall, Spring

Prerequisite: Physiology 201. Effects of various types of physical activity upon the circulatory, respiratory, and other physiological processes. How skill, endurance, fatigue, training, and related factors affect athletic performance.

434 Prevention and Care of Athletic Injuries (2) Fall, Spring

Prerequisite: Physiology 201 or Anatomy 201. Conditioning for the prevention of injuries; techniques of massage, bandaging, and taping; immediate care of injuries; methods of recovery treatment.

444 Organization and Administration of Physical Education and Athletics (2) Fall, Spring

Administrative policies, selection of staff; construction and use of facilities; class organization, finances and budgeting; purchase and care of equipment; publicity in physical education, athletics, and intramurals.

460 School Camping and Outdoor Education (2) Fall

Aims, organization, administration, and program of the school camp.

496W-X-Y-Z Special Projects * (1-2) Fall, Spring

Prerequisites: Consent of instructor and the division chairman. Participation, under faculty supervision, in planning, preparing, presenting, and coaching of Los Angeles State College sponsored intramural and intercollegiate athletic activities.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

* Eight units is the maximum number permitted in 496 or a combination of 496 and 398. No more than four units may be earned in any one activity. 496 and 398 may not be taken concurrently.

GRADUATE COURSES**501 Tests and Measurements in Physical Education (2)**

Fall, Spring

Prerequisite: Graduate status with major in physical education or consent of instructor. Test of anthropometry, organic function, native physical capacity, achievement, and knowledge; their uses in the physical education program.

510 Supervision of Physical Education (2) Fall, Spring

Prerequisite: Graduate status with major in physical education or consent of instructor. History, philosophy, principles, and techniques of supervising physical education in the elementary and secondary schools; professional qualities and preparation of supervisors.

522 Seminar in Current Problems in Physical Education (3)

Fall, Spring

Prerequisite: Graduate status with major in physical education or consent of instructor. Consideration of current problems in physical education through analysis of literature and research findings.

545 Program Planning in Physical Education (2) Fall, Spring

Prerequisite: Graduate status with major in physical education or consent of instructor. History, background, philosophy, and current types of physical education instructional programs at the elementary, junior high school, high school, and junior college levels; methods of planning functional physical education curricula; adaptation of programs to facilities and staff.

546 Problems in Intramural and Interscholastic Athletics (2)

Fall, Spring

Prerequisite: Graduate status with major in physical education or consent of instructor. Current problems and recent trends in the conducting of intramurals and interscholastic athletics. Principles, procedures, and organization in competitive athletics.

599A Graduate Project (1) Fall, Spring

Prerequisite: Graduate status with major in physical education. Definition and identification of a project, project writing procedure, library research, organization and form of project. Development by the student of a proposed project problem.

599B Graduate Project (2) Fall, Spring

Prerequisite: Completion of or concurrent enrollment in P.E. 599A. Development, writing and completion of an actual graduate project under the guidance of a faculty committee.

PHYSICAL SCIENCE

(In the Division of Science and Mathematics)

STAFF: Jaffe (Co-ordinator), members of the Chemistry, Geology, and Physics departments.

BACHELOR'S DEGREE CURRICULA

General Secondary Teaching Major in Physical Science

(With accompanying minor in Biological Science or Mathematics)

The courses listed below are selected to provide a broad training in the physical sciences combined with a minor in either biological science or mathematics for the teaching major. The combined physical science major and biological science minor includes the program listed below plus 10 units of approved upper division biological science courses. The combined physical science major and mathematics minor includes the program listed below plus nine units of approved upper division mathematics courses. See also pages 151-152 for professional education requirements.

Lower Division

Chemistry 101—General Chemistry.....	5 units
Chemistry 102—General Chemistry and Qualitative Analysis.....	5 units
Mathematics 100—Basic Mathematical Analysis *.....	4 units
Mathematics 201—Analytic Geometry and Calculus I.....	4 units
Mathematics 202—Analytic Geometry and Calculus II.....	4 units
Physics 201—General Physics I.....	4 units
Physics 202—General Physics II.....	4 units
Physics 203—General Physics III.....	4 units
Geology 101—Physical Geology.....	4 units
Botany 100—General Botany.....	5 units
Zoology 100—General Zoology.....	5 units

Upper Division

Chemistry 410—Advanced Inorganic Chemistry <i>or</i>	
Chemistry 401A—Organic chemistry I <i>and</i>	
Chemistry 402A—Organic Chemistry Laboratory.....	3-5 units
Astronomy 411—Introduction to Astrophysics.....	3 units
Physics 301—General Physics IV.....	4 units
Physical Science Electives.....	2-4 units
Biological Science electives selected with approval of adviser <i>or</i>	
Mathematics electives selected with approval of adviser.....	9-10 units

71-72 units†

* See first footnote page 319.

† When a student has completed 68 units in his major and minor program a B.S. degree in physical science will be awarded if all other graduation requirements have been met. The graduate year must include six units of physical science or mathematics courses in the 400 series.

SUGGESTED COURSE SEQUENCE FOR GENERAL SECONDARY TEACHING MAJOR IN PHYSICAL SCIENCE

(With accompanying minor in Biological Science)

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Chem. 101—Gen. Chemistry.....	5	Chem. 102—Gen. Chemistry & Qual. Analysis	5
*Math. 100—Basic Math. Analysis	4	Math. 201—Anal. Geom. and Calc. I	4
Geol. 101—Phys. Geology.....	4	Physics 201—Gen. Physics I	4
†Engl. 150—Written Expr. <i>or</i>		†Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3

SOPHOMORE YEAR

Math. 202—Anal. Geom. and Calc. II	4	Physics 203—Gen. Physics III.....	4
Physics 202—Gen. Physics II.....	4	Bot. 100—Gen. Botany.....	5
Zool. 100—Gen. Zoology.....	5	Art 150—Art, Music, Dance	3
Govt. 150—Govt. and Amer. Soc.	3	Psych. 150—Human Behavior	3
		P.E. 150	1

JUNIOR YEAR

Chem. 410—Adv. Inorganic Chem. <i>or</i>		Educ. 300—Intro. Cred. Prog.	N.Cr.
Chem. 401A—Org. Chemistry <i>and</i>		Biol. Sci. elective	3
Chem. 402A—Org. Chem. Lab.	3-5	Engl. 250—Understanding Lit.	3
Biol. Sci. elective	3	Hist. 250—U. S. History.....	3
Phil. 150—Phil. Ideas	3	Educ. 413—Psych. and Soc.	5
Phys. Educ. elective	1	H&S 350—Personal Health	2
Electives	4		

SENIOR YEAR

Bio. Sci. elective.....	4	Astron. 411—Intro. to Astro Phys. ..	3
Educ. 471—Sec. Educ.	5	Gen. Educ. electives.....	5
Educ. 493—Methods	2	Educ. 493—Methods	2
Electives	5	Gen. Educ. Soc. Sci. elective.....	3
		Elective	3

GRADUATE YEAR

Physics 301—General Physics IV....	4	Phys. Sci. Elective	2-4
Educ. 443Y—Directed Teaching....	3	Educ. 443Z—Directed Teaching ...	3
Educ. 444Y—Prob. in Sec. Tchng. ..	1	Educ. 444Z—Prob. in Sec. Tchng. ..	2
Educ. 480—Fund. Counsel. and Guid.	2	Educ. 490—Audio-Visual	2
Electives	4	Electives	3

* Students having four years of high school mathematics must start their program with Math. 201 and complete both Math. 202 and 203.

† See "Note" on page 61.

SUGGESTED COURSE SEQUENCE FOR GENERAL SECONDARY TEACHING MAJOR IN PHYSICAL SCIENCE

(With accompanying minor in Mathematics)

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Chem. 101—Gen. Chemistry.....	5	Chem. 102—Gen. Chemistry & Qual. Analysis	5
**Math. 100—Basic Math. Analysis	4	Math. 201—Anal. Geom. & Calc. I	4
Geol. 101—Phys. Geology.....	4	Physics 201—Gen. Physics I.....	4
†Engl. 150—Written Expr. or		†Sp. 150—Oral Expr. or	
Lang. Arts 150A.....	3	Lang. Arts 150B.....	3

SOPHOMORE YEAR

Math. 202—Anal. Geom. & Calc. II	4	Math. 203—Anal. Geom. & Calc. III	4
Physics 202—Gen. Physics II.....	4	Physics 203—Gen. Physics III.....	4
Bot. 100—Gen. Botany	5	Zool. 100—Gen. Zoology.....	5
Govt. 150—Govt. & Amer. Soc....	3	Psych. 150—Human Behavior.....	3

JUNIOR YEAR

Chem. 401A—Org. Chemistry.....	3	Mathematics elective	3
Chem. 402A—Org. Chem. Lab.	2	Hist. 250—U. S. History.....	3
Mathematics elective	3	Phil. 150—Phil. Ideas	3
Art 150—Art, Music, Dance.....	3	Educ. 413—Psych. & Soc.	5
P.E. 150	1	H&S 350—Personal Health.....	2
Electives	4		
Educ. 300—Intro. Cred. Prog.....	N.Cr.		

SENIOR YEAR

Engl. 250—Understanding Lit.....	3	Astron. 411—Intro. Astro. Phys.....	3
Educ. 471—Sec. Educ.	5	Gen. Educ. electives	5
Educ. 493—Methods	2	Educ. 493—Methods	2
Phys. Educ. Elective	1	Gen. Educ. Soc. Sci. elective.....	3
Electives	5	Elective	3

GRADUATE YEAR

Physics 401—Modern Physics	3	Phys. Sci. 444—Frontiers Phys. Sci.	3
Educ. 443Y—Directed Teaching ..	3	Educ. 443Z—Directed Teaching ..	3
Educ. 444Y—Prob. in Sec. Tchng.	1	Educ. 444Z—Prob. in Sec. Tchng.	2
Educ. 480—Fund. Counsel. & Guid.	2	Educ. 490—Audio-Visual	2
Electives	4	Electives	3

General Secondary Teaching Minor in Physical Science

See also pages 151-152 for professional education requirements. A teaching major in a different teaching field is also required.

*Biological Science 153—Principles of Biology I or

Botany 100—General Botany or

Zoology 100—General Zoology 3-5 units

Chemistry 101—General Chemistry 5 units

Chemistry 102—General Chemistry and Qualitative Analysis..... 5 units

Physics 101—General Physics I 4 units

* Students having credit for Math. 100 by examination and four years of high school mathematics or as part of their mathematics major, must register for Botany 100 or Zoology 100.

** Students having four years of high school mathematics must start their program with Mathematics 201 and substitute three or four units of a mathematics elective after the completion of Mathematics 203.

† See "Note" on page 61.





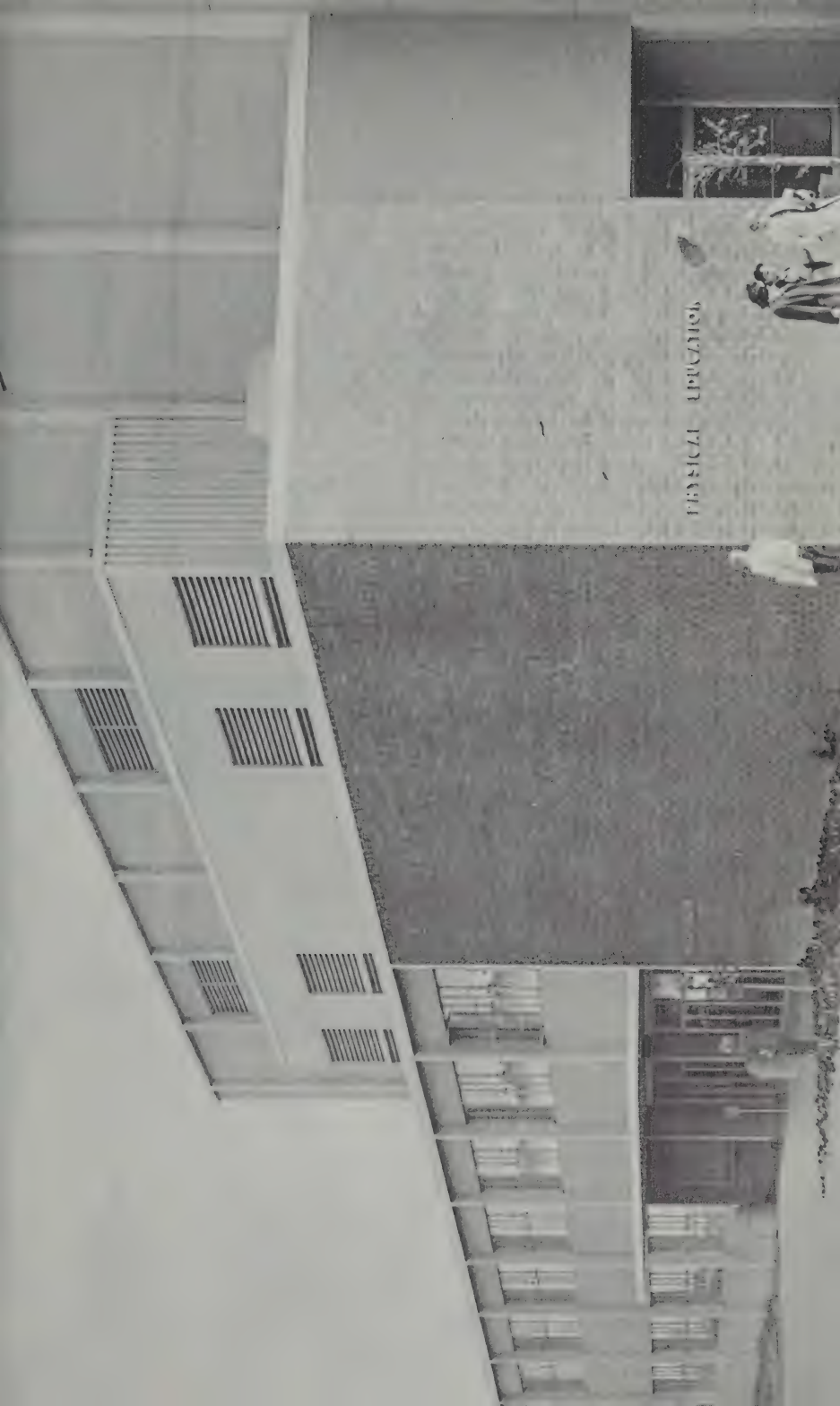
Down In the Valley



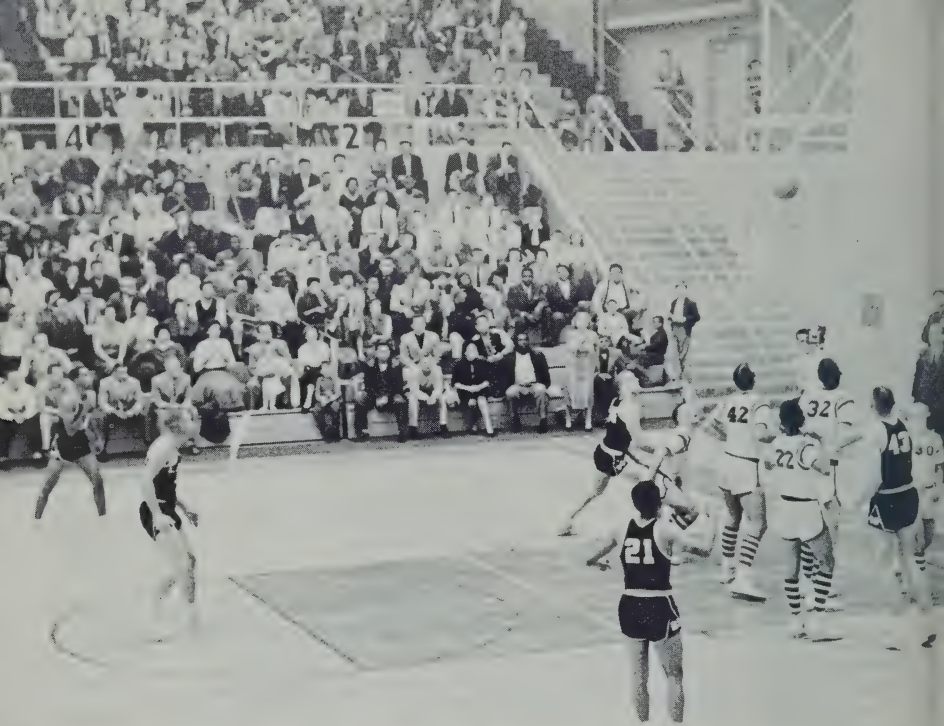
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OPERA WORKSHOP SCENES
Amahl and the Night Visitors





TECHNICAL EDUCATION



Physics 102—General Physics II	4 units
Mathematics 100—Basic Mathematical Analysis	4 units
Select from the following at least 6 units	6 units
Astronomy 301—History of Astronomy (3)	
Chemistry 401A—Organic Chemistry (3)	
Geology 101—Physical Geology <i>or</i>	
Geology 420—Principles of Geology (3)	
Physics 401—Modern Physics (3)	

 29-31 units

COURSES OF INSTRUCTION

Physical Science

151 Principles of Physical Science I (3) (General Education)

Study of basic concepts of motion, energy, and matter and their relationship to man's environment. Emphasis on methods of scientific inquiry. Ability to use simple algebraic equations is assumed.

152 Principles of Physical Science II (3) (General Education)

Prerequisite: Physical Science 151. Beginning course in college chemistry or physics may be accepted as the prerequisite if approved by the instructor. Application of previously learned concepts to the study of earth, earth processes and earth history, and to some concepts of the universe.

PHYSICS

(In the Division of Science and Mathematics)

STAFF: Jacobs (Department Head), Hirsch, Norris, Pape, Stahl, Thompson.
Part-time: Clayton, Holmes, Kenealy, Wagner.

BACHELOR'S DEGREE CURRICULA

Two majors are offered in physics, one leading to the bachelor of science degree and another leading to the bachelor of arts degree. While both contain a wide coverage of the basic fields of physics, the B.S. program (132 units) includes advanced laboratory courses and additional elective work to prepare the student for graduate work or immediate employment as a professional physicist. The B.A. major is intended for the prospective teacher or liberal arts student. These two programs are identical in the lower division.

Bachelor of Science Major in Physics

Lower Division

Physics 201, 202, 203—General Physics I, II, III.....	12 units
Chemistry 101—General Chemistry.....	5 units
Chemistry 102—General Chemistry and Qualitative Analysis.....	5 units
Geology 101—Physical Geology *.....	4 units
Mathematics †.....	15-16 units

Upper Division

Astronomy 411—Introduction to Astrophysics.....	3 units
Physics 301—General Physics IV—Modern Physics.....	4 units
Physics 411—Methods of Measurement.....	3 units
Physics 412—Basic Electronics.....	4 units
Physics 425A-B—Introduction to Theoretical Physics.....	6 units
Physics 426A-B—Electricity and Magnetism.....	6 units
Additional units in physics selected with approval of adviser.....	11-12 units
(Physics electives may include course work in mathematics or any science area with approval of adviser. Physics 431—Geometric and Physical Optics (4) is recommended for all majors.)	

79 units

Bachelor of Arts Major in Physics

Lower Division

(Requirements are same as for Bachelor of Science Major).....	41-42 units
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Upper Division

Astronomy 411—Introduction to Astrophysics.....	3 units
Physics 301—General Physics IV—Modern Physics.....	4 units
Physics 425A-B—Introduction to Theoretical Physics.....	6 units
Physics 426A-B—Electricity and Magnetism.....	6 units

* Geology 101—Physical Geology is recommended but not required of students transferring to L. A. S. C. as juniors.

† The typical sequence in mathematics will include Math. 201, 202, 203, and 401.

Additional units in physics selected with approval of an adviser.....8-9 units
 (Physics electives may include course work in mathematics or any science area with approval of adviser. Physics 431—Geometric and Physical Optics (4) is recommended for all majors.)

 69 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR PHYSICS MAJOR

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Math. 201	4	Physics 201—Gen. Physics I	4
Chem. 101—Gen. Chemistry	5	Math. 202	4
Geol. 101—Phys. Geology	4	Chem. 102—Gen. Chemistry and Qual. Analysis	5
† Engl. 150—Written Expr. <i>or</i>		† Sp. 150—Written Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3
P.E. 150	1	Phys. Educ. elective	1

SOPHOMORE YEAR

Physics 202—Gen. Physics II	4	Physics 203—Gen. Physics III	4
Math. 203	4	Math. 401	3-4
Govt. 150—Govt. & Amer. Soc.	3	Psych. 150—Human Behavior	3
Art 150—Art, Music, and Dance	3	Biol. Sci. 153—Prin. of Biology	3
Hist. 250—U.S. History	3	Phil. 150—Phil. Ideas	3

JUNIOR YEAR

Physics 301—Gen. Physics IV	4	Astron. 411—Astrophysics	3
Physics 425A—Intro. Theor. Phys.	4	* Physics 412—Basic Electronics	4
Physics 426A—Elec. and Mag.	2	Physics 425B—Intro. Theor. Phys.	4
Elective, see page 322	3	Physics 426B—Elec. and Mag.	2
Gen. Educ. Soc. Sci. elective	3	Engl. 250—Underst. Lit.	3

SENIOR YEAR

* Physics 411—Methods of Meas.	3	Physics electives	3-6
Physics electives	3-6	Gen. Educ. elective	3
H & S 350—Personal Health	2	Electives	7-10
Gen. Educ. elective	3		
Electives	3-6		

MASTER'S DEGREE CURRICULA

A master's degree in physics may be part of the curriculum by fall semester 1961. For information, contact either the Department of Physics or the Division of Science and Mathematics.

COURSES OF INSTRUCTION

Astronomy

301 History of Astronomy (3)

Important astronomical concepts and problems from the standpoint of their historical development and the contributions of great astronomers. Does not emphasize mathematical formulation of the subject.

* For B.S. majors only. B.A. majors will substitute elective.

† See "Note" on page 61.

411 Introduction to Astrophysics (3) Fall

Prerequisite: Physics 203. Study of kinematics and dynamics of the earth, solar system, stars, observational data and their determination, stellar atmospheres and interiors, and stellar evolution; includes description of galactic and extra-galactic systems.

Physics**101 Physics I (4) Fall**

Prerequisite: Math. 100 or consent of instructor. Presentation of physics without the use of calculus. Includes mechanics, heat, sound and light. Emphasis on the application of physical principles to natural phenomena. Not accepted for physical science majors; required for biological science majors and recommended for students in behavioral sciences.

102 Physics II (4) Spring

Prerequisite: Physics 101. Continuation of Physics 101. Includes electricity, magnetism, atomic, and nuclear physics. Lecture three hours; laboratory three hours.

201 General Physics I (4)

Prerequisites: One year high school physics or consent of instructor, and Math. 201. Detailed and fundamental treatment of mechanics using calculus. Intended primarily for physics and engineering majors. Lecture three hours; laboratory three hours.

202 General Physics II (4)

Prerequisites: Physics 201, Math. 202. Continuation of Physics 201. Includes heat, light, and sound. Lecture three hours; laboratory three hours.

203 General Physics III (4)

Prerequisites: Physics 202, Math. 203. Continuation of Physics 202. Includes electricity, magnetism. Lecture three hours; laboratory three hours.

301 General Physics IV—Modern Physics (4)

Prerequisite: Physics 203. Continuation of Physics 203. Includes discussion of electron physics, atomic and molecular structure, nuclei and nuclear particles. Lecture three hours; laboratory three hours.

398 Work-Study Assignments and Reports (1-2)

Prerequisite: Active, approved employment under the work study program. Analysis and reports of the student's performance; regular group meetings.

401 Modern Physics (3)

Prerequisites: Physics 101 and 102 or equivalent. Basic principles of modern particle physics and electronics. Involves a minimum of mathematics and stresses accurate understanding of the basic concepts. Recom-

mended for teaching minors. Not open to physics or physical science majors.

411 Methods of Measurement (3)

Prerequisite: Physics 203. Precision measurement and application of statistics to error analysis. Theory and application of electrical and magnetic measuring instruments. Lecture two hours; laboratory three hours.

412 Basic Electronics (4)

Prerequisite: Physics 203. Electronics circuits with primary emphasis on factors entering into the design, use, and analysis of electronic instruments. Includes circuit analysis, properties of electron tubes, power supplies, amplifiers, feedback, multivibrators, etc. Lecture three hours; laboratory three hours.

425A-B Introduction to Theoretical Physics (3-3)

Prerequisite: Physics 203. Introduction to the application of mathematics to the solution of problems in physics. Emphasis on general field of mechanics. Mathematical topics include vector calculus, differential equations, calculus of variations, complex variables.

426A-B Electricity and Magnetism (3-3)

Prerequisite: Physics 203. Theoretical electricity and magnetism; introduction to solution of boundary value problems. Includes electrostatics, electrodynamics and electromagnetic fields.

427 Heat and Thermodynamics (3)

Prerequisite: Physics 203. Introductory course covering fundamental concepts of thermodynamics with emphasis on principles involved.

428 Statistical Physics (3)

Prerequisite: Physics 427. Continuation of Physics 427 including statistical mechanics and application of statistical mechanics and thermodynamics to kinetic theory.

431 Geometric and Physical Optics (4)

Prerequisite: Physics 301. Intermediate course dealing with problems of geometric optics, interference, diffraction, and other topics of physical optics. Lecture three hours; laboratory three hours.

432 Introduction to Quantum Mechanics (3)

Prerequisite: Physics 425A. Elementary introduction to quantum mechanics. Emphasis on principles rather than mathematical formulation. Includes uncertainty principle, Schroedinger's equation, exclusion principle, harmonic oscillator, hydrogen atom, scattering and binding energy problems.

433 Introduction to Solid State Physics (3)

Prerequisites: Physics 301 and 425A. Introduction to physical processes in solids including energy band theory, electrical conduction, optical absorption, thermal behavior, magnetism, crystal structure and the chemical bond.

434 Introduction to Low Temperature Physics (3)

Prerequisite: Physics 427. Introductory course dealing with the phenomena of low temperature and the experimental techniques used.

435 Elementary Reactor Theory (3)

Prerequisite: Physics 301 and 425A. Introduction to nuclear reactor theory. Includes the fission process, neutron diffusion theory, reactor equations, stability and control problems.

441 Radiation Physics (3)

Prerequisite: Physics 102 or equivalent. Qualitative and semi-quantitative discussion of types of radiation, their detection, effects of radiation on materials, biological effects of radiation and radiation hazards. Not open to physics majors.

442 Radiation Physics Laboratory (2)

Prerequisite: Physics 441. Designed to familiarize student with the handling of radioactive material and X-ray emitting sources, and in-field methods of detection, control, and mop-up. Laboratory six hours.

444 Radioisotope Techniques (3)

Prerequisites: Chemistry 101, Physics 301 or 401 or 441. A laboratory course dealing with the problems and practice of handling and measurement techniques that will enable the scientific investigator to use radioactive materials in his research program. Topics include preparation of radioactive sources, laboratory characterization, standardization, separation methods, special applications of radioisotopes such as radiometric analysis, radioautography, geological dating. Lecture one hour, laboratory six hours.

445 Advanced Electronics (3)

Prerequisite: Physics 412. Further study of topics discussed in Physics 412; emphasis on circuits most commonly used in research laboratories. Lecture two hours; laboratory three hours.

465 Microwave Electronics (3)

Prerequisite: Physics 426B. Introduction to electrical field theory, generation of microwaves. Includes discussion of klystrons, magnetrons, traveling wave tubes and high frequency diodes.

466 Microwave Laboratory (1)

Prerequisite: Physics 465 (may be taken concurrently). Experiments on microwave generators, bridges, properties of microwave circuit elements such as "T's," directional couplers. Laboratory three hours.

469 Physical Electronics (3)

Prerequisite: Physics 426AB. Theory of electron emission, behavior of electrons in electric and magnetic fields, theory and design of electron devices.

470 Experimental Physics Laboratory (3)

Prerequisite: Consent of instructor. Laboratory course to familiarize students with modern laboratory techniques. Includes high vacuum, materials of physics, particle detectors. Lecture one hour; laboratory six hours.

472 Physics Research Projects (1-3)

Prerequisite: Approval of instructor. Laboratory course organized on a project basis open to a limited number of exceptionally qualified physics majors each year. Emphasis on developing experimental ability and initiative of student by allowing him to carry out projects of his own design.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

GRADUATE COURSES**510AB Mathematical Methods of Physics (3-3)**

Prerequisites: Bachelor's degree in physics, mathematics, or chemistry, or Physics 425AB and 426AB. Solution of typical problems arising in classical and modern physics. Topics include: numerical and analytic treatment of equations; series; tabulated functions; Green's functions and Dirac delta function; asymptotic expansions; eigenvalues and variational methods; Poisson distribution; integral equations.

512AB Principles of Modern Physics (3-3)

Prerequisites: Bachelor's degree in physics or Physics 301, 425AB and 426AB, or equivalent. Problem and lecture course in the experimental and theoretical foundations of modern physics. Topics include introduction of the quantum mechanics, atomic structure; spectroscopy; molecular binding; quantum statistics; theory of solids; radioactivity and nuclear structure; elementary particles; high energy physics relativity.

530 Theoretical Mechanics (3)

Prerequisites: Bachelor's degree in physics or Physics 425AB and 426AB or equivalent. Generalized coordinates; Lagrange's equations; rigid-body dynamics; Hamiltonian theory; special relativity theory; transition from classical to quantum mechanics, perturbation theory; mechanics of continuous media.

531 Electrodynamics (3)

Prerequisites: Bachelor's degree in Physics or Physics 425AB and 426AB. Electrostatics, Green's function and solution of Poisson's equation; magnetic fields; electromagnetic induction; displacement current; Maxwell's equations; Poynting's vector; retarded potentials; wave zone and radiation; Lorentz covariance, relativity theory.

542 Physics Research Conference (N. Cr.)

Prerequisite: Graduate status. Weekly meetings of physics staff and advanced students for report and discussion of recent literature and progress in laboratory. Discussions led by staff members and invited speakers.

597 Graduate Research (1-3)

Prerequisites: Admission to graduate status and approval of Physics Department. Directed research on original problems. Student may repeat to maximum of 6 units.

POLICE SCIENCE AND ADMINISTRATION

(In the Division of Technical Sciences)

STAFF: G. D. Gourley (Department Head), Bristow, Diamond, Hankey, Jones, Williams. *Part-time:* Davis, Duncan, Fulton, Glavas, Gockey, Houghton, Iannone, Ireland, Koenig, Puthuff, Simon, Smith.

BACHELOR'S DEGREE CURRICULUM

Major in Police Science and Administration

Designed for either inservice or preservice students who wish to prepare for, or to improve themselves in, the several forms of police work.

A total of 128 units is required for the bachelor of science degree in Police Science and Administration, including a minimum of 42 units within the major, not less than 22 units of the major being in upper division work. An additional 12 units is required in related fields.

Lower Division

Police Science 101—Criminal Justice	3 units
Police Science 102—Police Administration	3 units
Police Science 124—Traffic Law	2 units
Police Science 126—Criminal Law	3 units
Police Science 221—Law of Evidence	2 units
Police Science 235—Criminal Investigation	3 units
Police Science 236—Traffic Control	2 units
Police Science 238—Police Patrol	2 units

Upper Division

*Police Science 401—Police Administrative Functions	3 units
*Police Science 402—Police Line Functions	3 units
*Police Science 403—Police Auxiliary Functions	3 units
*Police Science 404—Special Problems in Law Enforcement	3 units
Police Science 461—Criminalistics	3 units
Select from the following	7 units

Police Science 322—Criminal Procedure (2)

Police Science 337—Vice Control (2)

Police Science 363—Interrogation and Lie Detection (2)

Police Science 398—Work-Study Assignments and Reports (1-2)

Police Science 436—Correctional Administration (3)

Police Science 439—Juvenile Law and Procedure (3)

Police Science 475—Industrial Plant Protection (3)

Police Science 481—Police Bibliography and Research (3)

Police Science 499AB—Independent Study (1-3)

Additional electives chosen with the approval of the adviser from

among courses relating to the police science major 12 units

54 units

NOTE: *Students Intending to Transfer from City or Junior Colleges.* Students intending to transfer from city or junior colleges to Los Angeles State College to continue work for a B.S. degree in Police Science and Administration are advised to concentrate upon general education requirements while in the lower division. Not over 20 units of lower division police courses will be accepted to apply toward the total major requirement. No lower division police course should be taken which is duplicated in the upper division curriculum of Los Angeles State College.

* Prerequisite: Police Science 102 or consent of instructor.

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR POLICE SCIENCE MAJOR

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
*Engl. 150—Written Expr. <i>or</i>		*Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3
Biol. Sci. 153—Prin. of Biology <i>or</i>		Biol. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151	3	Phys. Sci. 151	3
Govt. 150—Govt. & Amer. Soc.	3	Art 150—Art, Music, Dance	3
P.E. 150	3	Phys. Educ. elective	3
P. S. 101—Crim. Justice	3	P. S. 126—Criminal Law	3
P. S. 102—Police Admin.	3	Elective	3

SOPHOMORE YEAR

Phil. 150—Phil. Ideas	3	Engl. 250—Understanding Lit.	3
Biol. Sci. 154 <i>or</i>		Hist. 250—U. S. History	3
Phys. Sci. 152	3	Gen. Educ. Soc. Sci. elective	3
Psych. 150—Human Behavior	3	P. S. 236—Traffic Control	2
P. S. 124—Traffic Law	2	P. S. 238—Police Patrol	2
P. S. 221—Law of Evidence	2	Electives	3
P. S. 235—Crim. Invest.	3		

JUNIOR YEAR

H&S 350—Personal Health	3	Gen. Educ. elective	3
P. S. 461—Criminalistics	3	†P. S. 402—Police Line Funct.	3
†P. S. 401—Pol. Adm. Functions ..	3	Police Science electives, p. 329 ..	2-3
Police Science electives, p. 329 ..	2-3	Related electives, p. 329	3
Related electives, p. 329	3	Electives	4-5
Electives	2-3		

SENIOR YEAR

Gen. Educ. elective	3	†P. S. 404—Spec. Probs. Law En.	3
†P. S. 403—Pol. Aux. Functions ..	3	Police Science electives, p. 329 ..	2-3
Police Science electives, p. 329 ..	2-3	Related electives, p. 329	3
Related electives, p. 329	3	Electives	7-8
Electives	4-5		

MASTER OF SCIENCE DEGREE

The master of science degree in public service with an option in police science and administration provides occupational training in the law-enforcement service with special emphasis on the development of leadership and administrative skills.

1. Prerequisite: An appropriate baccalaureate degree from an accredited college or university and the following courses or their equivalents:

Government 303—State and Local Government (3)
Government 305—American Federal Government (3)
Sociology 210—Elementary Social Statistics (3)
Sociology 480—Criminology (3)

2. General core:

Government 460—Principles of Public Administration (3) *or*
Government 461—Principles of Municipal Administration 3 units

* See "Note" on page 61.

† Prerequisite: Police Science 102 or consent of instructor.

- | | |
|---|---------|
| Government 560—Seminar in Public Administration (3) <i>or</i> | |
| Government 561—Seminar in State and Local Administration..... | 3 units |
| Government 590—Philosophy of Public Service..... | 3 units |
3. Core curriculum, police:
- | | |
|--|---------|
| Government 472—Organization and Management..... | 3 units |
| Police Science 481—Police Bibliography and Research..... | 3 units |
| Police Science 501—Seminar in Police Administration..... | 3 units |
| Police Science 538—Seminar in Police Problems..... | 3 units |
4. Additional courses approved by adviser..... 9 units
5. Internship, work-study or approved field projects..... 6 units
(This requirement may be waived if the student is employed in a law enforcement agency at an acceptable level involving supervisory or administrative responsibility or high technical proficiency.)
6. A comprehensive examination will be required.

 36 units

Master of Science Degree in Criminalistics

This program is not currently offered, but is being considered.

COURSES OF INSTRUCTION

101 Criminal Justice (3) Fall, Spring

Basic course dealing with all agencies involved in administration of criminal justice; police history; organization of local, state and federal police agencies; courts and trials; jails, prisons, and reformatories; probation and parole; armed services; criminal justice in foreign countries.

102 Police Administration (3) Spring

Analysis of factors affecting police service; survey of management and organization principles applied to police service; fundamentals of personnel management; operation of patrol, investigative, traffic, vice and juvenile forces; consideration of activities involved in records management, communications, jails, property, supply and transport; special police relationships and problems.

123 Civil Law for Police (2) Spring

Brief survey of civil law and procedures including civil complaints, subpoenas, writs, and judgments of special application to the police.

124 Traffic Law (2) Fall

Study of the California Vehicle Code and related laws with reference to the traffic problem.

126 Criminal Law (3) Fall

History and development of criminal law; elements of a crime; parties to a crime; law of arrest; elements of specific crimes.

221 Law of Evidence (2) Fall

Leading rules and principles of exclusion and selection; burden of proof; nature and effect of presumptions; proof of authenticity and contents of writings; examination, competency, and privilege of witnesses; search and seizure.

235 Criminal Investigation (3) Fall, Spring

Investigative methodology in the field of crime; relations of the detective with other law enforcement divisions; techniques and principles for gathering, evaluating, and preserving physical evidence; *modus operandi*; sources of information; surveillance; personal identification; interrogation; preliminary and followup investigations.

236 Traffic Control (2) Spring

Organization and functions of the police traffic division; educational, engineering, and enforcement methods; technique of the traffic survey; traffic accident investigation; elements of a sound traffic program.

238 Police Patrol (2) Fall

Responsibilities, powers and duties of uniformed patrolmen; patrol procedure; field interrogation; mechanics of arrest; transportation of prisoners; raids; riot and crowd control; crime prevention functions of the officer on patrol.

262 Police Photography (2) Spring

Application of photography to the police field with emphasis on the preservation of physical evidence and its courtroom presentation.

264 Fingerprints (2) Spring

Science of fingerprints in law enforcement work, including techniques and procedures involved in classification, latent impressions, and court presentation.

322 Criminal Procedure (2) Spring

Criminal procedure from apprehension to conviction; search and seizure; arrest with and without warrants; arrest by private citizens; extradition proceedings; information and indictment; functions of the grand jury and coroner's inquest; procedure at the trial; appeals and new trials.

337 Vice Control (2) Fall, Spring

Code and case law dealing with vice; detection and suppression; apprehension and prosecution of violators; special consideration of laws dealing with gambling, prostitution and sex crimes.

363 Interrogation and Lie Detection (2) Fall

Survey of modern methods of handling witnesses, informants, and suspects; evaluation of lie detection methods and techniques; psychological and physiological considerations in interrogation.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

401 Police Administrative Functions (3) Fall, Spring

Prerequisite: Police Science 102 or consent of instructor. Detailed examination of current command-level problems and trends in police

organization and management; the planning process as an aid to administrative operation in procedure, tactics and budgeting on all law enforcement levels; administration of a comprehensive personnel program including methods of selection, training, promotion, and supervision.

402 Police Line Functions (3) Fall, Spring

Prerequisite: Police Science 102 or consent of instructor. Comprehensive analysis of the organization and management of the patrol, investigative, traffic, vice, and juvenile activities of law enforcement agencies including a critical examination of procedures, methods and techniques used in implementing police line functions.

403 Police Auxiliary Functions (3) Fall, Spring

Prerequisite: Police Science 102 or consent of instructor. Detailed analysis of the organization and management of the supporting units in police agencies including structure and functions of police records and communication systems; aims, objectives and techniques of custodial care; effective control and care of property and equipment.

404 Special Problems in Law Enforcement (3) Fall, Spring

Prerequisite: Police Science 102 or consent of instructor. Analysis of special police relationships and problems; internal and external public relations; causes, methods of prevention, and techniques of handling race riots, strikes, and similar disturbances; the role of the police in civil defense and major disaster.

436 Correctional Administration (3) On Demand

Aims and objectives of correctional administration; laws; records; public relations; types of personnel and relationships to programs, including custodial and noncustodial interrelationships and divisions; physical plant and security; employment and care and treatment program.

439 Juvenile Law and Procedure (3) Fall, Spring

The California Juvenile Court Act, The Youth Authority, and other legislation governing juvenile delinquency and crime prevention; rights of juveniles as distinguished from those of adults; sociological and psychological development in California law in the prevention of crime by juveniles, including probation procedures and institutional care.

461 Criminalistics (3) Fall, Spring

Collection, preservation, analysis, and interpretation of physical evidence of various types, including footprints, tiretracks, toolmarks, blood, hair, textiles, stains, dust, dirt, and debris; narcotic identification and determination of intoxication; casting and moulage; questioned documents; forensic ballistics and explosives; photomicrography and spectrography; court presentation and expert testimony. Lecture two hours; laboratory three hours. (NOTE: This course is designed to aid in the training of investigators. It does not qualify student as a criminalist or laboratory technician.)

475 Industrial Plant Protection (3) On Demand

Protection of buildings and contents; organization and supervision of plant guards and watchmen; personnel investigations; theft control; principles for night lighting; organizing for emergencies; plant safety; organizing for fire protection; security surveys; wartime vs. peacetime protection.

481 Police Bibliography and Research (3) Spring

Research methodology in the police field; survey of authorities and their writings; research reports and manuscripts.

499A-B Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

501 Seminar in Police Administration (3) Fall

Prerequisites: Graduate standing and consent of the instructor. Advanced studies in police administration at the local, state, and federal levels of government; police problems, organization, personnel management, training; police patrol, investigation, vice control, traffic control; communications, records, property and equipment; juvenile delinquency control; special police problems, public relations.

538 Seminar in Police Problems (3) Spring

Prerequisites: Graduate standing and consent of instructor. Advanced investigation of and report on selected critical problems in the field of police administration. Emphasis on the scientific method and acquaintance with reliable methods of research.

PRINTING MANAGEMENT

(In the Department of Industrial Arts, Division of
Technical Sciences)

STAFF: Dobson (Department Head), Hoffman (Adviser).

The major presented below has been prepared to give the student an extensive training in the skills of a particular major industry, as well as a grasp of the principles and techniques of business management. The curriculum has been developed through close consultation with the graphic arts industry.

The lower division portion of the program is primarily concerned with the acquisition of skills and techniques of the printing industry. The upper division portion is primarily concerned with the business management phases. In addition every student meets the general education requirements of the college.

Lower Division Requirements

Business 200A, Business 200B and Economics 201A.....	9 units
Ind. Arts 130, 431ABC.....	12 units

Upper Division Requirements

A. Accounting and Finance Courses	
Select either Business 300 or Business 303.....	3 units
B. Management Courses	
Business 306 and Business 479.....	6 units
Select one from the following: Business 313, 360, 468, or 471.....	3 units
C. Marketing Courses	
Select one from the following: Business 304, 330, or 341.....	3 units
D. Related Business and Economics Courses	
Business 308 * and Economics 302.....	8 units
Select two from the following: Business 309, Economics 303, or Economics 310	6 units
E. Graphic Arts Courses	
Industrial Arts 432A, 432B, and 433.....	9 units

Students who have not had work experience with a printing concern will be required to complete at least two units of Industrial Arts 398. (Student should consult pages 249-253 and 114-128 for course descriptions.)

* Students who have taken three semester units of business law in junior college are to take Business 305. Students who have taken six units of business law in lower division are to take Business 480.

PSYCHOLOGY

(In the Division of Social Sciences)

STAFF: Wilkening (Department Head), Balvin, Baranski, Cannicott, Diamond, Dunlap, Goldenberg, Graham, Haralson, Hutchinson, Kalish, Lewis, Lund, Marks. Phelan, Richardson, Schneider, Thompson, Troup, Wang.

BACHELOR'S DEGREE CURRICULA

Major in Psychology

The major in psychology, consisting of 30 units of upper division courses, prepares students for graduate professional training as psychologists, while offering opportunity for specialized training in such areas as counseling and industrial psychology.

Lower Division

Required

Psychology 101—Introduction to Psychology.....	3 units
Psychology 201—Elementary Physiological Psychology.....	3 units
Recommended: Two full years of a foreign language.	

Upper Division

Core requirements

Psychology 302—Statistical Methods in Psychology.....	3 units
Psychology 304—Experimental Psychology	3 units
Psychology 306—Physiological Psychology	3 units
Psychology 308—Contemporary Psychology	3 units

Select 18 upper division units with consent of an adviser. This selection can include courses leading to specialization in counseling, industrial psychology, or a broad background in general psychology.	18 units
	36 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR PSYCHOLOGY MAJOR

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
*Engl. 150—Written Expr. <i>or</i>		Psych. 101—Intro. to Psych.	3
Lang. Arts 150A	3	*Sp. 150—Oral Expr. <i>or</i>	
Biol. Sci. 153—Prin. of Biology <i>or</i>		Lang. Arts 150B	3
Phys. Sci. 151	3	Biol. Sci. 153—Prin. of Biology <i>or</i>	
Math. 140—Basic Math. for Bus.		Phys. Sci. 151	3
and Soc. Sci.	3	Phys. Educ. elective	1
Govt. 150—Govt. & Amer. Soc.	3	Elective	5
P.E. 150	1		
Elective	3		

* See "Note" on page 61.

SOPHOMORE YEAR

<i>First Semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Psych. 201—Elem. Physio. Psych.	3	Phil. 150—Phil. Ideas	3
Biol. Sci. 154—Prin. of Biology or		Art 150—Art, Music, Dance	3
Phys. Sci. 152	3	*Anthro. 250—Cultural Anthro.	3
Engl. 250—Underst. Lit.	3	*Phil. 250—Logic	3
Hist. 250—U. S. History	3	Electives	4
Elective	4		

JUNIOR YEAR

Psych. 302—Statistical Methods ..	3	Psych. 308—Contemp. Psych.	3
*Psych. 410—Abnormal Psych.	3	Psych. 306—Physiol. Psych.	3
*Psych. 416—History of Psych.	3	*Psych. 422—Social Psych.	3
Soc. 250—Man & Society	3	*Engl. 472—Amer. Lit.	3
H&S 350—Personal Health	2	Electives	3
Elective	2		

SENIOR YEAR

Psych. 304—Experimental Psych.	3	*Psych. 497—Psych. Proseminar....	3
*Psych. 418—Psych. of Personality	3	Psychology electives in field of	
Psychology electives in field of		concentration	3-6
concentration	3-6	Electives	3-6
Electives	0-3		
Gen. Educ. elective	3		

Recommended electives:

- (1) Math. 100, Math. 201, or Math. 350.
- (2) Biological Science 410 (genetics), Physiology 100.
- (3) Basic laboratory course in physical science.
- (4) Two years of foreign language.

MASTER'S DEGREES IN PSYCHOLOGY

The graduate programs are built on the foundation of undergraduate preparation. The master's degrees require intensive directed study in psychology aimed at depth of understanding.

MASTER OF SCIENCE DEGREE

1. Prerequisite: Acceptable undergraduate preparation in psychology, including completion of core requirements. (See major in psychology.)
2. Area of specialization
 - a. Psychology 414†—Advanced Statistical Methods in Psychology 3 units
 - b. Psychology 500 or 501—Seminar in Advanced General Psychology..... 3 units
 - c. Minimum additional "500" courses in psychology..... 12 units
 - d. Comprehensive written examinations in selected fields of psychology.
3. Other courses approved in advance by the adviser..... 12 units
4. Directed field experience or field study..... 6 units

(This requirement may be waived for students with adequate prior experience in the occupational field. The adequacy of this prior experience will be determined by the department. Any combination of field experience and teaching experience which meets the requirements for a Pupil Personnel Services Credential with specialization in School Psychology also satisfies this requirement.)

* Recommended.

† If Psychology 414 was taken in undergraduate status, the adviser will recommend a "400" or "500" psychology course as a substitute.

MASTER OF ARTS DEGREE

1. Prerequisite: Same as Master of Science Degree.
2. Area of specialization
 - a. Psychology 414*—Advanced Statistical Methods in Psychology 3 units
 - b. Psychology 416*—History of Psychology 3 units
 *If Psychology 414 or 416 was taken in undergraduate status, the adviser will recommend "400" or "500" psychology courses as substitutes.
 - c. Psychology 500 or 501—Seminar in Advanced General Psychology 3 units
 - d. Additional "500" courses in psychology 9 units
 - e. Comprehensive written examinations in selected fields of psychology
3. Approved courses outside the area of psychology 6 units
4. Other courses approved in advance by the adviser 6 units
 (3 units of applicable credit may be obtained for writing of a thesis.)

COURSES OF INSTRUCTION

Lower Division

101 Introduction to Psychology (3) (Formerly Psychology 300)

Introduction to the psychological processes of development, individual differences, perception, learning, thinking, motivation, intelligence, personality and social behavior. Facts and principles pertinent to an analysis of behavior. Includes laboratory.

150 Human Behavior (3) (General Education)

Acquaints student with the history of man's persistent efforts to understand his own behavior, encouraging an appreciation of the scientific method and a readiness to apply it to problems of human behavior.

201 Elementary Physiological Psychology (3)

Prerequisite: Psychology 101. Survey of relations between behavioral and physiological processes. Covers neurons, sensory, muscular, and glandular structures and functions in their relationship to learning, perceptual, motivational and emotional activities. Includes laboratory.

Upper Division

General prerequisite: One year of college psychology or consent of instructor.

301 Mental Hygiene (2) Fall, Spring

Social and emotional adjustment and personality in the light of mental hygiene principles; special attention to adjustment problems of the college student.

302 Statistical Methods in Psychology (3) Fall, Spring

Prerequisite: Mathematics 140 or equivalent. Commonly used measures of central tendency; variability and correlation; significance of individual scores and of individual and group differences; elementary principles of research design.

304 Experimental Psychology (3) Fall, Spring

Prerequisite: Psychology 302. Experiments in problems of human learning, remembering, perception, and personality. Emphasis on basic problems of research-design and experimental techniques. Lectures and laboratory.

306 Physiological Psychology (3) Fall, Spring

The relationship between integrated behavior and physiological processes. Study of theories relating psychology and physiology.

308 Contemporary Psychology (3) Fall, Spring

Contemporary psychological theories and systems in their historical perspective and present position.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study or internship program. Analysis and reports of the student's performance; regular group meetings.

406 Mental Deficiency (3) Fall, Spring

The nature and causes of mental deficiency; physiological and psychological characteristics. Problems of social control, including education, social adjustment, institutionalization, and community responsibility.

410 Abnormal Psychology (3) Fall, Spring

Historical overview of abnormal psychology; criteria of abnormal behavior; symptomatology; disturbing forces in personality formation; therapeutic considerations.

412 Child Psychology (3) Fall, Spring

Developmental trends in infancy and childhood. Study of current literature. Credit will not be given for both Psychology 412 and Education 402.

413 Psychology of Adolescence (3) Fall, Spring

Recommended prerequisite: Psychology 412. Problems of adolescents; physical and social development during adolescence.

414 Advanced Statistical Methods in Psychology (3) Spring

Prerequisite: Psychology 302 and consent of instructor. More advanced techniques of correlation, analysis of variance, and factor analysis, as applied to testing procedure and research. Further study of research design.

416 History of Psychology (3) Fall, Spring

Consideration of the historical development of psychology from its origins in ancient philosophy and science to the end of the nineteenth century.

418 Psychology of Personality (3) Fall, Spring

Biological and cultural determinants of personality; dimensions of personality and their measurement or appraisal; integration of personality as related to adjustment.

420 Human Communication (3) Spring

Psychological factors involved in the creation and manipulation of symbols. Art and science as forms of communication. Emphasis on psychological aspects of communication media (radio, television, and motion picture).

422 Social Psychology (3) Fall, Spring

Inquiry into group dynamics. Study of social interaction and its effects upon the individual and the group. Credit not given for both Psychology 422 and Sociology 422.

424 Psychology of Learning (3) Fall, Spring

Consideration of major theoretical systems of learning; Hull, Guthrie, Tolman, Skinner. Analysis and interpretation of experimental literature.

426 Psychological Factors in Marriage (3) Fall, Spring

Problems of money, in-laws, sex, etc., with emphasis on the psychological insights necessary for adjustment to self and others and to social and cultural institutions.

430 Introduction to Psychological Testing (Group) (3)

Prerequisite: Psychology 302 or equivalent. Basic concepts of psychological measurement as applied to the construction, evaluation, and use of group-administered tests of intelligence, aptitude, interest, personality, etc. Lectures and laboratory.

431 Psychological Testing (Individual) (3)

Prerequisites: Psychology 302 and 430 or equivalent. The concept of intelligence; the most commonly used tests of intelligence; emphasis on practical experience in administering and interpreting individual intelligence tests (especially the Revised Stanford-Binet and the Wechsler scales). Lectures and laboratory.

433 Psychological Testing (Applied to the Mentally and Physically Atypical) (3)

Prerequisite: Psychology 431. Selection, administration, and interpretation of tests used for appraising the atypical individual. Survey of etiological theories. Lectures and laboratory.

436 Counseling and Interviewing (3) Fall, Spring

Prerequisites: Consent of instructor and senior or graduate standing. Introduction to the problems and techniques of counseling and interviewing. Presentation of the attitudes and objectives of the counselor and counselee.

438 Survey of Clinical Psychology (3) Fall, Spring

Prerequisite: Psychology 410. Elementary course in methods of clinical psychology with consideration of the relationship of diagnosis, therapeutic techniques, and research to the field of clinical psychology.

440 Attitude and Opinion Measurement (3) Fall

Prerequisite: Psychology 302. Attitude scales and public opinion surveys. Design of investigation, sampling methods, analysis of results, and applications to various psychological problems. Field work.

442 Industrial Psychology (3) Fall, Spring

Psychological techniques in modern industry; selection, training, and evaluation of employees; morale and promotion; fatigue and safety practices.

446 Employment and Personnel Psychology (3) Fall

Prerequisite: Psychology 302. The application of psychological principles to the technical problems involved in developing a personnel testing program and in appraising its effectiveness; employment procedures; job success.

448 Psychology of Labor Relations (3) Spring

Exploration of the human relations involved with union and management; psychological aspects of conflict and co-operation between labor and management; the role the psychologist plays in union relations. Field work and guest speakers.

497 Psychology Proseminar (3) Spring

Senior course: recommended for all psychology majors. Introduction to psychological method. Designed to prepare students for graduate work in psychology.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly. (Open only to students majoring in Psychology.)

GRADUATE COURSES

Minimum prerequisites: A bachelor's degree and superior academic performance in psychology.

500 Seminar in Advanced General Psychology (3)

Critical review of current literature, theories, methods and problems, concerning sensory, learning, and symbolic processes.

501 Seminar in Advanced General Psychology (3)

Critical review of current literature, theories, methods and problems, concerning motivation, emotion, and perception.

504 Advanced Experimental Methods (3)

Prerequisite: Consent of instructor. Emphasis on design of experiments and apparatus employed in psychological research. The student becomes familiar with basic laboratory equipment and designs an experiment in his field of major interest. Lectures and laboratory.

506 Seminar in Physiological Psychology (3)

Prerequisites: Psychology 201, 306, 414, and Statistical Analysis of Psychological Data. Consent of instructor. Critical evaluation of experimental work in the field of physiology with the object of incorporating such results into the preparation of advanced students in psychology. Detailed attention to methods and apparatus used in physiological study, plus handling of data and conclusions drawn from such methods.

510 Seminar in Abnormal Psychology (3)

Prerequisites: Psychology 410 and graduate standing. Intensive analysis of major types of abnormal behavior, their development and prevention. Emphasis on the relationship of abnormal behavior to theories of personality and research findings.

512 Behavior Disorders in Children (3)

Prerequisite: Psychology 410, 412, or equivalent. Application of principles of psychology to behavior disorders in children. Designed primarily for clinicians, social workers, and parent educators.

514 Design and Analysis of Experiments (3)

Prerequisites: Psychology 414. Consideration of problems in measurement of psychological variables; examination of experimental design possibilities engendered by modern statistical techniques; practice in preparation of designs and in efficient processing of data.

522 Seminar in Social Psychology (3)

Prerequisites: Psychology 422 and the equivalent of Psychology 420 or 440. Theory, methodology, and applied problems dealing with the complex phenomena of group life. Analysis of the psychological tools for group adjustment; group dynamics, assessment of social attitude, role playing, psycho-drama, etc. Individual projects.

531 Psychodiagnostic Testing (3)

Prerequisites: Psychology 418, 431, 438 and consent of instructor. Clinical application of tests for the measurement of intelligence and personality; evaluation of qualitative aspects and limitations in functioning due to emotional and organic factors and the integration of these findings into the clinical case study. Lectures and laboratory.

534A-B Methods of Appraising Personality (3-3)

Prerequisite: Psychology 531, and consent of instructor. First semester: theories of personality and perception as a basis for understanding the implications of projective techniques. Experience in administering and interpreting the TAT, CAT, Maps, Four-Picture Test, and other thematic material. Second semester: appraising personality by means of the Rorschach Technique; administration, scoring, and basic interpretation. Lectures and laboratory.

536 Seminar in Counseling (3)

Prerequisites: Psychology 418 or 436, 438, or their equivalents, and consent of instructor. Intensive class discussion of recorded counseling

interviews and of typical counseling situations, co-ordinated with reading of current literature in this area.

538 Clinical Techniques in Psychology (3)

Prerequisite: Psychology 534A-B and consent of instructor. Experience in applying diagnostic methods to actual clinical cases. Advanced analysis and integration of projective techniques and case study material; emphasis on the effective oral and written presentation of clinical findings.

541 Applied Methods for Group and Leadership Situations (3)

Prerequisite: 12 units in courses dealing with human relations and consent of instructor. Study of interpersonal relations and leadership within various social organizations. The origin of conflict, co-operation, and misunderstanding within groups. Emphasis on superior-subordinate relations. Applied methods for group motivation and activities toward accomplishing group goals with emphasis on minimizing conflict and maximizing effort.

590 Practicum in Counseling (3)

Prerequisite: Psychology 536 and consent of instructor. Supervision of field and laboratory experiences in counseling.

595 Field Experience in Psychology (1-6)

Prerequisites: Admittance to candidacy for the Master's degree in Psychology or acceptance in the Pupil Personnel Credential program in the fields of Psychology or Psychometry, and 15 units of graduate work. Admission by approval of department committee. Applications must be filed with the committee by December 15 or April 15 of the preceding semester. Directed work experience in one or more fields of psychology under supervision of a faculty member. May be repeated, but not to exceed a total of six units.

599 Graduate Project (3)

RECREATION EDUCATION

(In the Division of Health and Safety, Physical Education,
Recreation and Athletics)

STAFF: Willott (Department Head), O'Brien, Olsen, Tillman, *Part-time*: Bahr, Frank, Delaney.

BACHELOR'S DEGREE CURRICULUM

Major in Recreation Education

The bachelor of science degree in recreation is designed to prepare student for employment in (a) public or group work agencies; (b) correctional or rehabilitation institutions; (c) industrial recreation. Provides the foundational training for entrance into graduate work in recreation.

All students are required to take a common core of lower and upper division courses. Professional electives offered in upper division permit a choice of subjects suited to the vocational objectives of the student. A total of 124 units is required for the B.S. degree in Recreation Education.

Lower Division

R.E. 132—Introduction to Playground Games.....	2 units
R.E. 232—Social Recreation Leadership.....	2 units
H&S 201—First Aid	2 units
R.E. 236—Camp Leadership	2 units
Art 102—Introduction to Crafts.....	2 units

Upper Division

Mu. 300—Music for Children.....	3 units
R.E. 462—Organization and Administration of Recreation.....	3 units
R.E. 468—Community Relations in Recreation.....	2 units
Ed. 402—Child Growth and Development.....	2 units
Ed. 490—Audio-Visual Instruction	2 units
R.E. 434—Dance in Community Recreation.....	2 units
R.E. 444—The Recreation Program.....	2 units
R.E. 470—Philosophy of Recreation.....	2 units
Psych. 301—Mental Hygiene	2 units
Soc. 482—Juvenile Delinquency	3 units
N.S. 461—Nature in California.....	3 units
P.E. 406—Methods of Teaching Individual Sports.....	2 units
R.E. 338-339—Directed Leadership	4 units
Spch. 460—Speech and Dramatic Activities in Elementary School.....	3 units
Govt. 463—Public Personnel Administration.....	3 units

50 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR RECREATION EDUCATION MAJOR

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
*Engl. 150—Written Expr. or		*Sp. 150—Oral Expr. or	
Lang. Arts 150A	3	Lang. Arts 150B	3
Govt. 150—Govt. & Amer. Soc.	3	Psych. 150—Human Behavior	3
Biol. Sci. 153—Prin. of Biology or		Phil. 150—Phil. Ideas	3
Phys. Sci. 151	3	R.E. 132—Indro. Playgrd. Gms.	2
Art 150—Art, Music, Dance	3	Phys. Educ.	1
P.E. 150	1	H&S 201—First Aid	1
Elective	3	Elective	3

SOPHOMORE YEAR

Biol. Sci. 153—Prin. of Biology or		Anthr. 250—Cultural Anthr.	3
Phys. Sci. 151	3	Engl. 250—Underst. Lit.	3
Hist. 250—U. S. History	3	Biol. Sci. 154—Prin. of Biology or	
R.E. 232—Soc. Recr. Ldrship.	2	Phys. Sci. 152	3
Art 102—Intro. to Crafts	2	Music 300—Music for Children	3
P.E. 180—Prof. Activities I	2	R.E. 236—Camp Ldrship.	2
Elective	3	P.E. 181—Prof. Activities II	2

JUNIOR YEAR

R.E. 462—Org. & Adm. of Recr.	3	R.E. 444—Recr. Program	2
R.E. 468—Commun. Relations	2	R.E. 470—Phil. of Recr.	2
Educ. 402—Child Growth	2	Psych. 301—Mental Hygiene	2
Educ. 490—Audio-Visual	2	Soc. 482—Juvenile Delin.	3
R.E. 434—Dance in Com. Recr.	2	R.E. 398—Work-Study	2
R.E. 398—Work-Study	2	Electives	4
Elective	3		

SENIOR YEAR

N.S. 355—Nature Study	3	Govt. 463—Public Pers. Admin.	3
P.E. 406—Meth. Tchng. Indiv. Spts.	2	R.E. 339—Ldrship. Publ. Recr.	2
R.E. 338—Ldrship. Priv. Recr.	2	Consv. 354—Conservation	3
Sp. 460—Sp. & Drama	3	N.S. 461—Nature in Calif.	3
H&S 350—Personal Health	2	Electives	5
Elective	3		

MASTER OF SCIENCE DEGREE

The master of science degree in recreation is built on a broad foundation of undergraduate preparation in recreation or closely allied fields, such as: sociology, theater arts, fine arts, physical education or education and is designed for those professional groups whose needs cannot be met by undergraduate preparation.

Option 1—Recreation Administration

Designed for administrators, supervisors, leaders and group workers already in the field who desire to extend professional competencies or need additional preparation in order to qualify for specific positions.

1. Prerequisites: Preprogram conference with assigned advisers to determine adequacy of preparation for graduate program.

2. Core requirements 15 units
 - R.E. 562—Surveys and Planning in Recreation (2)
 - R.E. 532—Construction and Maintenance of Parks, Playgrounds and Recreation Facilities (2)
 - R.E. 564—Legal and Financial Aspects of Recreation (2)
 - R.E. 566—Administration of Public Recreation (2)
 - R.E. 582—Research, Measurement, and Evaluation in Recreation (2)
 - R.E. 524—Seminar in Current Problems in Recreation (2) *or*
 - R.E. 542—Recreation for Special Groups (2)
3. Supporting courses outside the field of recreation.
 - Select from the following 9 units
 - Govt. 461—Principles of Municipal Administration (3)
 - Govt. 560—Seminar in Public Administration (3)
 - Govt. 590—Philosophy of Public Service (3)
 - Bus. 473—Personnel Management (3)
 - Select from the following 6 units
 - Psych. 413—Adolescent Psychology (3)
 - Psych. 420—Human Communication (3)
 - Psych. 436—Counseling and Interviewing (3)
 - Psych. 422 *or*
 - Soc. 422—Social Psychology (3)
 - Soc. 472—Community Welfare Organization (3)
 - Soc. 460—Race Relations (3)
4. Internship 3-6 units

(This requirement may be waived for students with adequate prior experience in the occupational fields; to be determined by the department.)

Option 2—Recreation Leadership

Designed for graduate students with an undergraduate preparation in recreation or closely related fields, such as social welfare, theater arts and music, who seek to prepare themselves for more specialized leadership roles in recreation.

1. Prerequisites: Preprogram conference with assigned adviser to determine adequacy of preparation for graduate program.
2. Core requirements 15 units
 - R.E. 470—Philosophy of Recreation (2)
 - R.E. 524—Seminar in Current Problems in Recreation (2)
 - R.E. 542—Recreation for Special Groups (2)
 - R.E. 562—Surveys and Planning in Recreation (2)
 - R.E. 566—Administration of Public Recreation (2)
 - R.E. 582—Research, Measurement and Evaluation in Recreation (2)
 - R.E. 599—Graduate Project (3)
3. Students electing to follow Option 2 shall determine their area of specialization from the following (with approval of adviser) 15 units
 - Education*

Students specializing in school or school-community recreation. (15 units)
 - Social Science*

Students specializing in work with group agencies, C. Y. O., Boy Scouts, Welfare, Youth Services. (15 units)
 - Related Arts*

Students specializing in arts and crafts, drama, or music. (15 units)

NOTE: A list of courses to complete the requirements for each of these concentrations must be obtained by the student from the head of the department.

4. Internship 3-6 units
(This requirement may be waived for students with adequate prior experience in the occupational field; to be determined by the department.)

COURSES OF INSTRUCTION

- 132 Introduction to Playground Games (2) Spring**
Games of low organization, leadup games, relays, stunts, and rhythmic activities suitable for playgrounds, community centers and outing groups, with emphasis on leadership for recreation purposes.
- 232 Social Recreation Leadership (2) Fall, Spring**
Leadership techniques in various social phases of recreation.
- 236 Camp Leadership (2) Spring**
Techniques of camp counseling and leadership; some program content; visits to nearby camps.
- 338 Directed Leadership in Private Recreation Agencies (2)**
Fall, Spring
Prerequisite: Major in Recreation Education. Supervised experience in recreation programs.
- 339 Directed Leadership in Public Recreation Agencies (2)**
Fall, Spring
Prerequisite: Major in Recreation Education. Supervised experience in recreation programs.
- 398 Work-Study Assignments and Reports (1-2) Fall, Spring**
Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.
- 434 Dance in Community Recreation (2) Fall, Spring**
Conduct of community dancing including advanced techniques in round, square, and social dances.
- 442 Special Events in Recreation (2) Fall**
The function of, and planning for, festivals and pageants in community and private recreation programs.
- 444 The Recreation Program (2) Fall**
Problems commonly encountered in planning content of recreation program including principles of program construction, scheduling, and evaluation in various fields of recreation.
- 462 Organization and Administration of Recreation (3) Fall**
Problems encountered in establishing and organizing a community for recreation services. Special emphasis given to governmental control, legislative provisions, municipal control, budgets, personnel, departmental organization, and administrative practices.

464 Employee Recreation (2) Fall

Fundamental techniques of organization and administration of recreation in industry.

468 Community Relations in Recreation (2) Spring

Development of the ability to interpret, promote, and publicize community recreational programs and activities through personal contacts and various publicity media.

470 Philosophy of Recreation (2) Fall, Spring

Interpretation of recreation as basic part of living process; its importance in individual, community and national life; its social and economic significance; the growing importance of leisure time problems.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

522 Seminar: Recreation in Public Education (2) Spring

Prerequisite: Graduate standing or consent of instructor. Uses of educational resources for recreation and community living. The after school program, summer programs, school camping, outdoor education, and adult education.

524 Seminar in Current Problems in Recreation (2) Fall

Prerequisite: Graduate standing or consent of instructor. Consideration of current problems in recreation through analysis of current literature, workshop and institute proceedings, and research findings.

532 Construction and Maintenance of Parks, Playgrounds, and Recreation Facilities (2) Fall

Prerequisite: Graduate standing or consent of instructor. Standards for site selection, development, facilities, and equipment; operation and maintenance of buildings and grounds.

542 Recreation for Special Groups (2) Spring

Prerequisite: Graduate standing or consent of instructor. Knowledge and technique necessary for initiating a recreation program of rehabilitation for mentally and physically ill or handicapped.

562 Surveys and Planning in Recreation (2) Fall

Prerequisite: Graduate standing or consent of instructor. Planning for recreation services and facilities based on studies and surveys. Scope, content, objectives, procedures, and types of recreation surveys.

564 Legal and Financial Aspects of Recreation (2) Spring

Prerequisite: Graduate standing or consent of instructor. Interpretation of state statutes affecting recreation. Special attention to contractual

agreements, leases, and torts. Analysis of fundamental principles and rules governing public recreation finance.

566 Seminar in Administration of Public Recreation (2) Spring

Prerequisite: Graduate standing or consent of instructor. Analysis of administrative duties and responsibilities, and suggested approaches and methods of administration that have been proved by actual experience.

**582 Research, Measurement and Evaluation in Recreation
(2) Spring**

Prerequisite: Graduate standing or consent of instructor. Review of various community research investigations in recreation; analysis of measurements used in the investigations and evaluation of the results obtained. Using the data presented in the course, the student will have the opportunity to engage in action research.

598 Directed Field Work in Recreation (3-6) Fall, Spring

Required of candidates who have not had two years of supervisory or administrative experience in the field of recreation. Experiences which will be accepted in lieu of this requirement must be determined by the department.

599 Graduate Project (3) Fall, Spring

RUSSIAN

(In the Division of Language Arts)

STAFF: Griessbach, Zimnavoda.

Courses leading to a major or a minor in Russian are not offered at the present time. Lower division Russian may be elected by students who seek a reading knowledge or who are interested in learning the language for other reasons.

Students entering Los Angeles State College from high school with four years of high school Russian are permitted to register in Russian 200B; those entering with three years, in Russian 200A; those with two years, enter Russian 100B; those with one year or less, enter Russian 100A.

COURSES OF INSTRUCTION

100A Elementary Russian I (4)

Methodical presentation of structure of the language through hearing, speaking, reading, and writing Russian.

100B Elementary Russian II (4)

Prerequisite: Russian 100A or equivalent. Oral and written treatment of graded reading material with purpose of reviewing structure, and increasing proficiency in understanding, speaking, reading, and writing Russian.

150 Basic Patterns in Russian (3) (General Education)

No prerequisite. Beginning course with emphasis on understanding and speaking the Russian used in everyday situations. Introduction to aspects of the history, culture, and psychology of the Russian people. This is a one semester terminal course for students who have no knowledge of Russian. This course cannot be substituted for Russian 100A.

200A Intermediate Russian I (4)

Prerequisite: Russian 100B, or equivalent. Endeavors to make the student more secure in his use of Russian. Training in reading and speaking with ease; writing simple Russian.

200B Intermediate Russian II (4)

Prerequisite: Russian 200A, or equivalent. Aims to make the student read and speak Russian fluently and to write simple Russian.

SOCIAL SCIENCE

(In the Division of Social Sciences)

STAFF: Potter (Adviser). Faculty from the Division of Social Sciences.

BACHELOR'S DEGREE CURRICULA

Major in Social Science

The purpose of the social science major is to provide a liberal education with main emphasis in the social sciences.

Lower Division

21 units including general education social science courses approved by adviser, with at least 3 units in each of the following fields: anthropology, economics, geography, government, history, sociology.

Upper Division

30 units as follows:

- a. Social Science 400—Scientific Methods in the Social Sciences (3)
- b. Courses approved by adviser totaling 15 units in one social science field, and 6 units in two other social science fields from the following: anthropology, economics, geography, government, history, philosophy, social psychology, sociology.

General Secondary Teaching Major in Social Studies

The major in *social studies* has been designed for students who have chosen social studies as their teaching major for the general secondary credential. Students completing this major will be prepared to teach the social sciences commonly taught in the junior and senior high schools of California. See also pages 151-152 for professional education requirements. A teaching minor in a different teaching field is also required for the general secondary credential. Students undertaking the social studies teaching major or minor must have the approval of a social studies adviser before taking upper division courses to fulfill the major or minor requirements. Social studies majors are not required to take History 250 to meet the general education history requirement.

A "C" average in all social science courses in the major and minor programs, in both lower and upper division, is required for a student teaching recommendation.

Lower Division

Government 150—Government and American Society.....	3 units
History 101AB—Man in Civilization.....	6 units
History 202AB—American Civilization.....	6 units
Psychology 150—Human Behavior.....	3 units
Geography 150—Human Geography.....	3 units
Geography 160—Physical Geography.....	3 units

Sociology 250—Man and Society <i>or</i>	
Anthropology 250—Cultural Anthropology	3 units
Economics 201—Principles of Economics	3 units

Upper Division

Approved courses in the following areas:

Geography (Regional or Systematic)	3 units
Government	
American Structural	3 units
Theoretical-Legal	3 units
History	
American (Period)	3 units
American (Topical)	3 units
Other	3 units
Sociology-Anthropology-Social Psychology	3 units
Economics	3 units

54 units

Graduate Year

Social Science 500A—Seminar in Social Science	3 units
Approved "500" social science course	3 units

60 units

NOTE: A Social Science adviser must be consulted to determine what courses meet the above requirements.

SUGGESTED COURSE SEQUENCE FOR SOCIAL STUDIES MAJOR WITH GENERAL SECONDARY CREDENTIAL

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Govt. 150—Govt. & Amer. Soc.	3	Hist. 101B—Man in Civil.	3
Hist. 101A—Man in Civil.	3	Biol. Sci. 153—Prin. of Biology <i>or</i>	
Biol. Sci. 153—Prin. of Biology <i>or</i>		Phys. Sci. 151	3
Phys. Sci. 151	3	Psych. 150—Human Behavior	3
†Engl. 150—Written Expr. <i>or</i>		Phil. 150—Phil. Ideas	3
Lang. Arts 150A	3	†Sp. 150—Oral Expr. <i>or</i>	
P.E. 150	1	Lang. Arts 150B	3
Elective	2	Phys. Educ. elective	1

SOPHOMORE YEAR

Biol. Sci. 154—Prin. of Biology <i>or</i>		Soc. 250—Man and Society	3
Phys. Sci. 152	3	Geog. 150—Human Geog.	3
Art 150—Art, Music, Dance	3	Hist. 202B—Amer. Civil	3
Anthro. 250—Cultural Anthro.	3	Econ. 201A—Prin. of Econ.	3
Hist. 202A—Amer. Civil	3	Geog. 160—Phys. Geog.	3
Engl. 250—Underst. Lit.	3		

JUNIOR YEAR

Ed. 300—Intro to Cred. Prog.	0	Geography course	3
Ed. 413—Psych. and Sociol.	5	Teaching minor	3
Teaching minor	3	Government course	3
History course (Amer.)	3	Ed. 471—Sec. Educ.	5
Soc.-Anth.-Soc. Psych. course	3	Elective	2
H. & S. 350—Personal Health	2		

† See "Note" on page 61.

SENIOR YEAR

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Ed. 480—Fund. Coun. & Guid.	2	Ed. 493—Methods	2
Ed. 490—Audio-Visual	2	Teaching minor	6
Teaching minor	6	Economics course	3
History course	3	History course	3
Government course	3	Elective	2

GRADUATE YEAR

Ed. 493—Methods (Minor)	2	Ed. 442Z—Directed Teaching	3
Ed. 442Y—Directed Teaching	3	Ed. 444Z—Prob. in Sec. Tchng.	2
Ed. 444Y—Prob. in Sec. Tchng.	1	500 Soc. Sci. course	3
Soc. Sci. 500—Sem. in Soc. Sci.	3	Elective	7
Elective	3-0		
Teaching minor	3-6		

General Secondary Teaching Minor in Social Studies

See also pages 151-152 for professional education requirements. A teaching major in a different teaching field is also required for the general secondary credential.

Lower Division

Courses approved by adviser totaling 12 units from three of the following fields: economics, geography, government, history, sociology-anthropology.

Upper Division

12 units of approved courses from three of the following fields (at least nine units in the lower and upper division combined must be in one field): anthropology-sociology, social psychology, economics, geography, government, history, philosophy.

MASTER OF ARTS DEGREE

The master of arts degree in social science is designed primarily for teachers of the social studies in the high schools and junior high schools of California. The program consists primarily of advanced work in social science fields commonly taught in these schools.

1. Prerequisite: 24 upper division units in at least four social science fields.

2. Area of Concentration:

- a. Social Science 500AB—Seminar in Social Science 6 units
- b. Approved "500" courses from two of the following fields: economics; geography; government; history; sociology - anthropology - social psychology 6 units
- Approved graduate project not to exceed three units may be included.
- c. Other approved courses in the social sciences 12 units
- d. Comprehensive written examination in the composite social science field, and in two social science fields designated when the program is made out.

3. Approved courses outside the area of the social sciences 6 units

30 units

COURSES OF INSTRUCTION

Prerequisites: Completion of two introductory courses in the social sciences.

400 Scientific Methods in the Social Sciences (3) Fall, Spring

Consideration of logic and scientific methods and their application to the various social sciences.

469 Contemporary Latin America (3) Fall

Introduction to the Latin American world through study of the contemporary scene and its literature. Recent economic, political, cultural, and social developments. Opportunity to read sources in Spanish and Portuguese.

GRADUATE COURSES

Minimum prerequisites: A bachelor's degree and superior academic performance in the social sciences.

500A-B Seminar in Social Science (3-3) Fall, Spring

Interdisciplinary approach to selected problems, regions, or trends; directed by the staff of the division.

SOCIOLOGY AND ANTHROPOLOGY

(In the Division of Social Sciences)

STAFF: Hager (Department Head), Adler, Baily, Diehl, Eberhart, Ewald, Faron, Fulton, Geis, Loether, Nahrendorf, Penchef, Rowan, Stanley, Thomlinson, Wallace.

BACHELOR'S DEGREE CURRICULUM

Major in Sociology

The sociology major leads to a bachelor of arts degree in sociology with emphasis on (1) general sociology or (2) social welfare and corrections. Courses of instruction in the major program seek to prepare students for advanced professional study, research, and for the informed application of occupational skills and competencies.

Lower Division (required of all majors)

Sociology 201—Introductory Sociology	3 units
Sociology 202—Introductory Sociology	3 units
*Sociology 210—Elementary Social Statistics	3 units

Upper Division (select either Option 1 or Option 2)

OPTION 1—GENERAL SOCIOLOGY

Required

Sociology 412—Development of Sociology	3 units
Sociology 414—Contemporary Sociological Theory	3 units
Sociology 490—Methods of Social Research	3 units
Select <i>one</i> course from each of the following groups	12 units

1. Sociology 430—Urban Sociology (3)
 Sociology 434—Population and World Resources (3)
 Sociology 447—Occupations and Professions (3)
 Sociology 448—Social Stratification (3)
2. Sociology 420—Small Group Processes (3)
 Sociology 422—Social Psychology (3)
 Sociology 424—Mass Communication and Public Opinion (3)
 Sociology 426—Sociopathic Behavior (3)
 Sociology 460—Intergroup Relations and Social Conflict (3)
3. Sociology 440—Marriage and the Family (3)
 Sociology 442—Social Change (3)
 Sociology 444—Social Organization and Comparative Institutions (3)
 Sociology 445—Sociology of Religion (3)
 Sociology 446—Industry and the Social Order (3)
4. Anthropology 401—Culture Areas of the World (3)
 Anthropology 405—Culture and Personality (3)
 Anthropology 410—Primitive Social Organization (3)
 Anthropology 412—Primitive Religion (3)
 Anthropology 497—History of Ethnological Theory (3)

Additional courses in sociology or anthropology

Total 39 units

* No more than 12 units of upper division residence work in sociology will be accepted toward a major before completion of Sociology 210.

OPTION 2—SOCIAL WELFARE AND CORRECTIONS

Sociology 412—Development of Sociology <i>or</i>	
Sociology 414—Contemporary Sociological Theory.....	3 units
**Sociology 470—The Field of Social Work.....	3 units
Sociology 472—Community Organization	3 units
Sociology 474—Methods of Social Work.....	3 units
Sociology 476—Child Welfare	3 units
Sociology 484—Contemporary Treatment of Law Violators <i>or</i>	
Sociology 486—Probation and Parole.....	3 units
Sociology 478—Social Legislation	3 units
Sociology 480—Criminology <i>or</i>	
Sociology 482—Juvenile Delinquency	3 units
Sociology 490—Methods of Social Research.....	3 units
Additional courses in sociology or anthropology.....	6 units
Total.....	42 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR
SOCIOLOGY MAJOR

Option 1—General Sociology

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
‡Engl. 150—Written Expr. <i>or</i>		‡Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A.....	3	Lang. Arts. 150B.....	3
Govt. 150—Govt. & Amer. Soc.....	3	Biol. Sci. 153—Prin. of Biology <i>or</i>	
Biol. Sci. 153—Prin. of Biology <i>or</i>		Phys. Sci. 151.....	3
Phys. Sci. 151.....	3	Psych. 150—Human Behavior.....	3
P.E. 150	1	*Geog. 150—Human Geog.....	3
Elective	3	Phys. Educ. elective.....	1
*Anthro. 250—Cult. Anthro.....	3	Elective	3

SOPHOMORE YEAR

Soc. 201—Intro. Sociology.....	3	Soc. 202—Intro. Sociology.....	3
Hist. 250—U. S. History.....	3	Soc. 210—Elem. Soc. Statistics.....	3
Biol. Sci. 154—Prin. of Biology <i>or</i>		Art 150—Art, Music, Dance.....	3
Phys. Sci. 152.....	3	*Econ. 150—Econ. for Citizen.....	3
Phil. 150—Phil. Ideas.....	3	Elective	3
Engl. 250—Understanding Lit.....	3		

JUNIOR YEAR

Soc. 412—Develop. of Soc.....	3	Soc. 414—Contemp. Soc. Theory.....	3
Soc. 448—Soc. Stratification.....	3	Soc. 460, 434, 445, <i>or</i>	
Soc. 420—Small Group Processes.....	3	Anthro. 401, 405.....	3
H&S 350—Personal Health.....	2	Soc. 447—Occupations and	
Electives	5	Professions	3
		Hist. 477—Social Hist. of U. S.....	3
		Elective	3

** Students electing the social welfare option are *strongly recommended* to take Sociology 470 before enrolling in other course work in this option.

* Recommended.

‡ See "Note" on page 61.

SENIOR YEAR

*First Semester**Units*

Soc. 490—Meth. of Soc. Research	3
Soc. 422—Soc. Psych. <i>or</i>	
Soc. 446—Soc. Organizations and Comparative Institutions	3
Econ. 412—Develop. of Economic Thought	3
Psych. 308—Contemp. Psych.	3
Gen. Educ. elective	3

*Second semester**Units*

Soc. 426—Socio. Behavior	3
Soc. 442—Social Change <i>or</i>	
Soc. 424—Mass Comm. & Public Opinion	3
†Soc. 411—Soc. Statistics	3
Hist. 476—Econ. Hist. of U. S.	3
Electives	4

Option 2—Social Welfare

FRESHMAN YEAR

*First semester**Units*

†Engl. 150—Written Expr. <i>or</i>	
Lang. Arts 150A	3
Biol. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151	3
Govt. 150—Govt. & Amer. Soc.	3
P.E. 150	1
Elective	3

*Second semester**Units*

†Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150B	3
Biol. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151	3
Psych. 150—Human Behavior	3
Geog. 150—Human Geog.	3
Elective	3

SOPHOMORE YEAR

Soc. 201—Intro. Sociology	3	Engl. 250—Understanding Lit.	3
Hist. 250—U. S. History	3	Soc. 202—Intro. Sociology	3
Biol. Sci. 154—Prin. of Biology <i>or</i>		Soc. 210—Elem. Soc. Statistics	3
Phys. Sci. 152	3	Art 150—Art, Music, Dance	3
Phil. 150—Phil. Ideas	3	Elective	6

JUNIOR YEAR

Soc. 412—Develop. of Soc.	3	Soc. 414—Contemp. Soc. Theory	3
Soc. 470—Field of Soc. Wk.	3	Soc. 330—Urban Sociology <i>or</i>	
Soc. 440—Marriage & Family	3	Soc. 472—Commun. Org.	3
Soc. Sci. 400—Logic	3	Soc. 434—Pop. & Wrld. Resources <i>or</i>	
H&S 350—Personal Health	2	Soc. 448—Soc. Stratification	3
Elective **	1-3	Elective	3-5
		Anthro. 405—Cult. & Person.	3

SENIOR YEAR

*Soc. 474—Methods of Soc. Wk.	3	*Soc. 490—Methods of Social Research	3
*Soc. 478—Soc. Legislation	3	*Soc. 480—Criminology <i>or</i>	
*Soc. 476—Child Welfare	3	Soc. 482—Juvenile Delinq.	3
Soc. 484—Treatment of Law Violators <i>or</i>		Soc. 426—Socio. Behavior	3
Soc. 486—Probation and Parole	3	Govt. 468—Publ. Welfare Adm.	3
Gen. Educ. elective	3	Elective	3

MASTER OF ARTS DEGREE

The master of arts degree in sociology provides advanced study in sociology and related fields for students teaching in this field and for those desiring the opportunity for advanced study in sociological theory and research.

* Recommended.

† Prerequisite: Sociology 210 or equivalent. Recommended for all majors planning graduate study.

** Social welfare majors should consider, when appropriate, Sociology 396, Field Work, and Sociology 398—Work-Study. These courses carry *unit* credit only for sociology majors.

† See "Note" on page 61.

The master of arts program in sociology provides training in eight fields of study: (1) the history and theory of sociology; (2) social research; (3) social welfare and corrections; (4) intergroup relations, race and culture; (5) social psychology and sociopathic behavior; (6) social institutions and social change; (7) population, urban and industrial sociology; (8) criminology and delinquency. A comprehensive examination is required of all candidates. All candidates must take examinations in areas (1) and (2); the candidate may then select any three areas from the remaining six to complete examination requirements.

1. Prerequisite: A minimum of 15 units of undergraduate preparation in sociology, including completion of core requirements or their approved equivalents.
 2. Areas of Study:
 - a. Required courses _____ 9 units
 - Sociology 505—Seminar in the History of Sociological Theory (3)
 - Sociology 514—Seminar in Contemporary Sociological Theory (3)
 - Sociology 590—Seminar in Social Research (3)
 - b. Approved graduate (500) courses in the field of sociology _____ 6 units
 - A master's thesis is *optional*; if option is chosen, the student will receive 3 units credit. Course designation for the option is Sociology 599.
 - c. Approved courses in sociology, must be upper division (400) courses _____ 9 units
 3. Comprehensive written examinations in selected fields of sociology. All candidates must take the comprehensive examination.
 4. Courses in allied fields chosen with approval of an adviser _____ 6 units
-
- 30 units

COURSES OF INSTRUCTION

ANTHROPOLOGY

Lower Division

201 Physical Anthropology (3) Fall, Spring

The origin and antiquity of man. Man's place in nature. Fossil evidence for human evolution. Varieties of man. Somatological and genetic bases for racial classification.

202 Old World Archeology (3) Spring

The growth of culture from the earliest beginnings to the emergence of the great civilizations, utilizing the concepts, methods and data of archeology.

250 Cultural Anthropology (3) (General Education) Fall, Spring

Exploration of the concept of culture. Problems of definition. The evolution of cultural systems. Application of the concept of culture to the analysis of selected problems.

Upper Division

Prerequisite: Except where specifically stated, Cultural Anthropology (250) or consent of instructor.

300 Archeological Field Methods and Techniques (3) Spring

Prerequisite: Consent of instructor. Introduction to the aims and methods of archeological survey and excavation and to the fundamentals of museum preparation. Fieldwork. Enrollment limited to 15 students.

401 Culture Areas of the World (3) Fall, Spring

Principal culture types and their distribution in the world. Application of ethnological problems to cultural data.

405 Culture and Personality (3) Fall, Spring

Personality development in the cultural milieu. National character, modal personality and other concepts in the field.

406 Indians of North America (3) Spring

The natives of North America north of Mexico; their origins, cultures, and culture change after European contact.

407 Indians of California and the Southwest (3) Fall

The Indians of California, Arizona, New Mexico and adjacent areas from earliest times to the present.

408 Middle America (3) Fall

Pre-Spanish civilizations of Mexico and Central America. The Conquest and Colonial backgrounds of present-day peoples. Contemporary societies and cultures of this area.

409 Language and Culture (3) Fall

Also listed as Language Arts 410. The role of language in the development of cultural patterns, including the relationships between change in language and change in culture. Analysis of language as the matrix of culture.

410 Primitive Social Organization (3) Fall, Spring

Prerequisites: Six units of anthropology and sociology selected from Anthropology 250 or 401, or from Sociology 414 or 444. Systems of kinship and marriage, with reference to incest, social control, morality, religion, law, politics, and economic organization.

412 Primitive Religion (3) Fall, Spring

The study of the origins, forms and symbolism of religion. A cross-cultural analysis of the role and functions of religion as a universal ingredient in human society.

414 Peoples and Cultures of South America (3) Fall

The prehistoric, historic, and contemporary cultures of South America, with emphasis on sociological and ethnological principles of analysis and comparison.

438 Peoples of Africa (3) Fall, Spring

Historical backgrounds and contemporary peoples and cultures of Africa south of the Sahara. Social: Western and Asian influences.

447 Peoples of the Pacific (3) Spring

The island peoples of Polynesia, Melanesia and Micronesia. Migration theories, Contemporary social and political systems. European contacts and culture change.

448 Peoples of Southeast Asia (3) Fall

Historical and contemporary survey of peoples and cultures of the mainland and islands of Southeast Asia.

497 History of Ethnological Theory (3) Spring

Historical survey and analysis of major schools of anthropological thought.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Twelve units of anthropology and consent of instructor to act as sponsor. Written and oral reports on project selected in conference with sponsor before registration. Progress meetings held at regular intervals.

SOCIOLOGY**Lower Division****201 Introductory Sociology (3) Fall, Spring**

The subject matter of sociology; sociological perspective and its distinctive contribution to the understanding of social life; social relationships and processes central to sociological inquiry; social order, socialization, culture, group processes, and social change.

202 Introductory Sociology (3) Fall, Spring

American social patterns, norms, and institutions; social characteristics and resources; institutional patterns—family, economic, industrial, political, religious, and educational; major American value orientations; mobility, stratification, role conflict, and institutional change.

210 Elementary Social Statistics (3) Fall, Spring

Statistical methods commonly used in the social sciences. Statistical presentation; tables, charts, measures of central value; sampling design and distributions; statistical inference; fundamentals of correlation and research design.

250 Man and Society (3) (General Education) Fall, Spring

Sociological approach to broad problems that confront modern man. Through use of selected concepts in sociology, an attempt is made to familiarize the student with the social structure and social processes of our national life and of society in general with the aim of encouraging and achieving intellectual clarity in assessing social issues and trends. (Sociology majors must take Sociology 201 and 202. This course does not carry credit toward the major in sociology for those students having had Sociology 201 and 202 or their approved equivalents.)

396 Field Work (Variable credit) Fall, Spring

Prerequisite: Consent of instructor. In-service training for social service personnel in public and private agencies. Conferences and field supervision. (This course carries unit credit only for the student majoring in sociology.)

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under work-study or internship programs. Analysis and reports of the student's performance; group meetings. (This course carries unit credit only for the student majoring in sociology.)

411 Advanced Social Statistics (3) Spring

Prerequisite: Sociology 210 or equivalent. Recommended for all sociology majors planning graduate study. Specialized treatment of probability and sampling; prediction and correlation; the analysis of variance and covariance; experimental design.

412 Development of Sociology (3) Fall, Spring

Historical and analytical consideration of the contributions of social philosophy and the social and natural sciences to the development and growth of sociology.

414 Contemporary Sociological Theory (3) Fall, Spring

Survey of sociological theory with emphasis on twentieth-century contributions. The status of sociological inquiry and theory. Relationship of sociology to such allied fields as anthropology, psychology, economics, education, and political science. Trends in applied sociology.

420 Small Group Processes (3) Fall, Spring

Small group processes in industry, family, schools, peer and colleague groups; reference-group behavior; small groups and the larger social system; group structure and communication.

422 Social Psychology (3) Fall, Spring

Inquiry into the social and psychological dimensions of group behavior. Group structures and psychological manifestations. Social interaction and its impact on the individual and personality formation.

424 Mass Communications and Public Opinion (3) Fall, Spring

Sociology of communications. Inquiry into mass culture, propaganda, public opinion, ideologies, and public sentiment, and their relationship to social structure. Analysis of techniques and forces used to shape or alter public opinion and social values.

426 Sociopathic Behavior (3) Fall, Spring

Social and personal disorganization treated as a consequence of role conflict, social conflict, competition and normlessness. Impact of group structure on individual and social deviance.

430 Urban Sociology (3) Fall, Spring

The urban community and urbanization. Urban areas, institutions, values, and problems. Social and demographic characteristics. Urban change and planning.

434 Population and World Resources (3) Spring

Analysis of causes and consequences of major population trends throughout the world; changes in birth and death rates, sex ratio, age distributions, race and nationality composition; marital, educational, and occupational status; population density, world resources, and under-developed countries.

440 Marriage and the Family (3) Fall, Spring

The family as a social institution. Historical and cross-cultural perspectives; social change affecting marriage and family; analysis of American courtship and marriage patterns; the psychodynamics of family life.

442 Social Change (3) Spring

Sources of change in societies; theories of social change and interpretation of social trends; social change and problems of under-developed countries; the dynamics of planned change.

**444 Social Organization and Comparative Institutions (3)
Fall, Spring**

Social institutions and forms of social organization, with special reference to contemporary social systems; family, government, industry, religion, education; institutional control and change.

445 The Sociology of Religion (3) Fall, Spring

The social bases of the religious institution and organizational life. Comparative analysis and theories of religious behavior. The social role of religion in modern societies. Religious conflict and the demands of secular society and public law.

446 Industry and the Social Order (3) Fall

The social setting of modern industry. Problems in industrialization. Theories of industry and unionism. Work satisfactions, job morale and security, collective bargaining, automation; problems in manpower and economic modernization.

448 Social Stratification (3) Fall, Spring

Inquiry into the nature, theory, and functions of social stratification. Criteria of social stratification, social differentiation, status, and role. Indices of class position, class interests; social class and socialization. Trends in occupational mobility. Comparative systems of stratification.

447 Sociology of Occupations and Professions (3) Fall, Spring

Occupational and professional roles. Pre-professional socialization. Occupational mobility, recruitment, selection, and training. Career patterns, professional ideologies, bureaucratic requirements, and status images.

460 Intergroup Relations and Social Conflict (3) Fall, Spring

Minority groups and movements. Theory and practice of intergroup relations; civil rights and equality of opportunity in education, employment, housing, etc; theories of social conflict and the role of conflict in the democratic society.

470 The Field of Social Work (3) Fall, Spring

Development of American social work; the scope, diversity, and efficacy of welfare programs designed to meet welfare problems in contemporary society.

472 Community Organization (3) Fall, Spring

Community development, structure, and organization; community problems; modern community services—government, planning, schools, welfare and health services; co-ordination of community resources.

474 Methods of Social Work (3) Fall, Spring

Theories, principles and practices, of social casework in group, medical, and psychiatric settings. Discussion of case work concepts, literature, and case materials directed toward the development of skills in social welfare work.

476 Child Welfare (3) Fall, Spring

Trends affecting growth and change in establishing the rights of children to care and protection. Emphasis on the child and the law; compulsory education, school social work, child labor legislation; institutional and foster care; adoption procedures; problems of troubled children.

478 Social Legislation (3) Fall, Spring

Study of social, legal, and legislative processes used to establish and maintain the general welfare; relationship between social values and social legislation; family, child, and labor legislation; public assistance and social security; future directions in social legislation.

480 Criminology (3) Fall, Spring

Criminal law, crime, and deviance. Social and psychological factors in criminal behavior; criminal law and criminal justice; prevention and control; trends in theory and correctional procedures.

482 Juvenile Delinquency (3) Fall, Spring

Extent and distribution of delinquency with emphasis on the local area. Meaning, implications, and treatment of delinquent behavior. Personal and environmental conditioning factors; delinquency and the rights of children.

484 Contemporary Treatment of Law Violators (3) Spring

Survey of procedures used in processing the offender; from arrest, through trial, to prison and probation. The social aspects of these procedures evaluated with regard to contemporary theories of criminality and rehabilitation.

486 Probation and Parole (3) Fall, Spring

The history, philosophy, legal basis, and procedures governing the investigation, treatment, and supervision of adjudged juvenile offenders and adult violators placed on probation and parole.

490 Methods of Social Research (3) Fall, Spring

Prerequisites: Sociology 210 or Sociology 434 or equivalent. Application of scientific method to social data; research design and procedures; schedule construction, scaling techniques, quantitative and qualitative case analysis; designs of proof.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Senior status with an over-all grade point average of 3.0 (B), and prior to registration, consent of an instructor to act as sponsor. The student must have ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

Minimum prerequisites: A bachelor's degree and superior performance in sociology.

505 Seminar in the History of Sociological Theory (3)

Historical dimensions, European and American, of the development of systematic sociological theory and method. Continuity and critique of the major contributions to theories of society and the social processes. Required for the M.A. degree in sociology.

510 Seminar in Social Statistics (3)

Advanced statistical methods. Statistical inference, variance and covariance, micro-statistics, nonparametric statistics; randomization tests, ranking methods, factorial experimentation; probabilities and deterministic models.

514 Seminar in Contemporary Sociological Theory (3)

Exploration and critique of the problems, methods, and theories, characteristic of contemporary sociological inquiry; their relationship and contribution to the advancement of sociological theory and its application to selected social problems. Required for the M.A. degree in sociology.

522 Seminar in Social Psychology (3)

Analysis and critique of modern approaches to and investigations of the social processes that interrelate individuals and groups.

534 Seminar in Population Problems and Urbanization (3)

Problems in population growth, urbanization, and industrialization; social and psychological factors in population dynamics; advanced methods of population analysis; population, planning, national resources, and public policy.

540 Seminar in Marriage and the Family (3)

Advanced study of the socio-psychodynamics of marriage and the family; emphasis on recent research regarding family change, parent-child relationships, and family instability, successful family life.

570 Studies in Social Welfare and Corrections (3)

Advanced study of individual and group phenomena as related to specific phases of social welfare and corrections on the local, state, and federal level. Field studies and class planning based on the student's interest in his field of study or employment.

580 Seminar in Criminology (3)

Advanced study of relationship between criminal behavior, social deviance, and social structure; contemporary criminality and criminal justice; comparative studies of criminal justice, criminal codes; legal, medical, and psychiatric interpretation of criminal behavior.

590 Social Research (3)

Advanced study of social research techniques and design. Supervised application of research methods to laboratory or field study situations; survey procedures. Required for the M.A. degree in sociology.

599 Graduate Project (1-4)

Variable credit; to be used for special graduate projects or by those students electing to write a master's thesis in sociology.

SPANISH

(In the Division of Language Arts)

STAFF: Bonhard, Lionetti, Marín, Schwartz.

Spanish is offered to students seeking baccalaureate degrees and to those seeking secondary teaching credentials. Lower division courses may also be used to fulfill requirements or recommendations of other departments in the college.

Students entering Los Angeles State College from high school with two years of Spanish should register in Spanish 100B; those entering with three years, in Spanish 200A; those with four years, in Spanish 200B. Full-year courses in Spanish completed in high school may not be repeated for graduation credit.

BACHELOR'S DEGREE CURRICULUM

Major in Spanish

Designed for students who elect to study Spanish as a non-teaching major.

Lower Division

Spanish 100AB—Elementary Spanish	8 units
Spanish 200AB—Intermediate Spanish	8 units

Upper Division

Spanish 400—Problems of Syntax I	3 units
Spanish 401—Problems of Syntax II	3 units
Spanish 402—Spanish Literature from the Beginnings through the Renaissance	3 units
Spanish 403—Spanish Literature of the Golden Age and the Eighteenth Century	3 units
Spanish 404—Nineteenth Century and the Romantic Movement in Spain	3 units
Spanish 405—Nineteenth Century Realism, and Contemporary Literature	3 units
Electives chosen from the following courses	6 units
Spanish 300—Conversation and Composition (3)	
Spanish 301—Advanced Oral and Written Composition (3)	
Spanish 420—Spanish-American Literature to 1888 (3)	
Spanish 421—Spanish-American Literature from 1888 (3)	

40 units

General Secondary Teaching Major

See also pages 151-152 for professional education requirements. A teaching minor in a second teaching subject is also required for the general secondary credential.

Lower Division

Spanish 100AB—Elementary Spanish	8 units
Spanish 200AB—Intermediate Spanish	8 units

Upper Division

Spanish 300—Conversation and Composition	3 units
Spanish 301—Advanced Oral and Written Composition	3 units
Spanish 400—Problems of Syntax I	3 units
Spanish 401—Problems of Syntax II	3 units
Spanish 402—Spanish Literature from the Beginnings through the Renaissance	3 units
Spanish 403—Spanish Literature of the Golden Age and the Eighteenth Century	3 units
Spanish 404—Nineteenth Century and the Romantic Movement in Spain	3 units
Spanish 405—Nineteenth Century Realism and Contemporary Literature	3 units

Graduate (Fifth Year)

Spanish 420—Spanish-American Literature to 1888	3 units
Spanish 421—Spanish-American Literature from 1888	3 units

 46 units
General Secondary Teaching Minor

See also pages 151-152 for professional education requirements. A teaching major in a second teaching subject is also required for the general secondary credential.

Lower Division

Spanish 200AB—Intermediate Spanish	8 units
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Upper Division

Spanish 300—Conversation and Composition	3 units
Spanish 301—Advanced Oral and Written Composition	3 units
Electives chosen from the following courses	6 units
Spanish 402—Spanish Literature from the Beginnings through the Renaissance (3)	
Spanish 403—Spanish Literature of the Golden Age and the Eighteenth Century (3)	
Spanish 404—Nineteenth Century and the Romantic Movement (3)	
Spanish 405—Nineteenth Century Realism and Contemporary Literature (3)	
Spanish 420—Spanish-American Literature to 1888 (3)	
Spanish 421—Spanish-American Literature from 1888 (3)	

 20 units
MASTER OF ARTS DEGREE

Students considering this degree should request a departmental adviser as soon as possible in order to plan the specific program.

Prerequisites: B.A. in Spanish or the equivalent. Adequate knowledge of spoken and written Spanish since all required courses are conducted in Spanish.

Requirements: A total of 24 units in Spanish and 6 units outside the field of concentration as follows:

Required courses in Spanish	12 units
Spanish 440—Hispanic Civilization (3)	
Spanish 501—Development of the Spanish Language (3)	
Spanish 575—Seminar in Spanish Literature (3-3)	
Electives to be chosen upon consultation with the adviser from among Spanish courses numbered above 440	12 units

Electives outside the field of concentration:

Choose <i>one</i> after consultation with adviser.....	3 units
Language Arts 410—Language and Culture (3)	
Language Arts 510—Seminar in Theories of Language (3)	
English 440—Critical Approaches to Literature (3)	
English 423—Nature and Language of Poetry (3)	
Choose <i>one</i> after consultation with adviser.....	3 units
Anthropology 408—Middle America (3)	
Geography 427—Geography of Middle America (3)	
Geography 428—Geography of South America (3)	
Government 431—Governments of Latin America (3)	
History 461—Latin America: Colonial Period (3)	
History 462—Latin America: National Period (3)	
History 466—Mexico (3)	
History 561—Seminar in Modern Mexico (3)	
Social Science 469—Contemporary Latin America (3)	

30 units

A comprehensive oral and/or written examination will be required of all candidates for the M.A. in Spanish over the fields of the Spanish language, and Spanish and Spanish-American literature and civilization.

COURSES OF INSTRUCTION

All upper division courses are conducted in Spanish.

100A Elementary Spanish I (4)

Methodical presentation of the structure of the language through hearing, speaking, reading, and writing Spanish.

100B Elementary Spanish II (4)

Prerequisite: Spanish 100A, or equivalent. Oral and written treatment of graded reading material with purpose of reviewing structure, and increasing proficiency in understanding, speaking, reading, and writing Spanish.

150 Basic Patterns in Spanish (3) (General Education)

No prerequisite. Beginning course with emphasis on understanding and speaking the Spanish used in everyday situations. Introduction to aspects of the history, culture, and psychology of the Spanish people. This is a one semester terminal course for students who have no knowledge of Spanish. This course cannot be substituted for Spanish 100A.

200A Intermediate Spanish (4)

Prerequisite: Spanish 100AB or equivalent. Emphasis on understanding and speaking Spanish. Reading and writing of simple Spanish.

200B Intermediate Spanish (4)

Prerequisite: Spanish 200A or equivalent. Rapid reading of Spanish for comprehension; writing; continued emphasis on understanding and speaking. Grammar review.

300 Conversation and Composition (3)

Prerequisite: Spanish 200AB or equivalent. Emphasis on the use of idioms—spoken and written; the increase of vocabulary; the reading of contemporary Spanish prose.

301 Advanced Oral and Written Composition (3)

Prerequisite: Spanish 200AB or equivalent. A review of grammar as used for communication skills; the writing of current Spanish; drill in more difficult patterns of speech.

400 Problems of Syntax I (3)

Prerequisite: Spanish 300 or Spanish 301 or equivalent. Intensive study of the Spanish verb; original written composition; translation of contemporary English or American short stories.

401 Problems of Syntax II (3)

Prerequisite: Spanish 300 or Spanish 301 or equivalent. Intensive study of Spanish grammar in preparation for teaching; original oral composition; translation of contemporary English or American short stories.

402 Spanish Literature From the Beginnings Through the Renaissance (3) Offered alternate years

Prerequisite: Spanish 200AB or equivalent. The Spanish epic; lyric poetry; the great satirists; the novels of chivalry; the Romances; humanism in Spain.

403 Spanish Literature of the Golden Age and the Eighteenth Century (3) Offered alternate years

Prerequisite: Spanish 200AB or equivalent. Representative writers of the Spanish theater; Don Quixote and other writings by Cervantes; the picaresque novel; other satirists; Gongorism and lyric poetry; decline of the eighteenth century.

404 Nineteenth Century and the Romantic Movement in Spain (3) Offered alternate years

Prerequisite: Spanish 200AB or equivalent. Romanticism in the theater and lyric poetry; the costumbristas.

405 Nineteenth Century Realism and Contemporary Literature (3) Offered alternate years

Prerequisite: Spanish 200AB or equivalent. Great novelists of the nineteenth century; Generation of '98; theater in the twentieth century; new poetry; contemporary outlook.

420 Spanish-American Literature to 1888 (3)

Prerequisite: Spanish 200AB or equivalent. Study of first chroniclers of Spanish-America; the Colonial Period; patriotic writers of Independence; Romanticism.

421 Spanish-American Literature From 1888 (3)

Prerequisite: Spanish 200AB or equivalent. The modernista movement; costumbristas of Spanish-America; the novel of social import; the theater; contemporary Spanish-American thought.

440 Hispanic Civilization (3)

Prerequisite: Spanish 300 and 301 or equivalent. Synthesis of cultural characteristics of Spain and Spanish-America.

460 Masters of Hispanic Culture and Thought: Selected Studies (3)

Prerequisite: Spanish 402, 403, 404, 405, 420, 421 or consent of instructor. Study of outstanding Spanish and Spanish-American writers from the Middle Ages to the present. Each semester an individual author will be studied such as Cervantes, Lope de Vega, Garcia Lorca, Romulo Gallegos, Ruben Dario, etc. May be repeated for credit as subject matter changes.

470 Contemporary Spanish Novel (3)

Prerequisite: Spanish 405 or equivalent. Intensive study of the Spanish novel of the last thirty years.

480 Contemporary Spanish-American Novel (3)

Prerequisite: Spanish 421 or equivalent. Intensive study of the Spanish-American novel of the last thirty years.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings regularly held.

Graduate Courses

Graduate standing is prerequisite to registration in the following courses.

501 Development of the Spanish Language (3)

Prerequisites: Spanish 400 and 401. Scientific analysis of written and spoken Spanish from its inception through its current use in the Hispanic world.

540 Contemporary Hispanic Poetry (3)

Prerequisites: Spanish 405 and Spanish 421 or equivalent. Study of Spanish and Spanish-American poetry of the last thirty years.

575 Seminar in Spanish Literature and Civilization (3)

Prerequisites: Spanish 402, 403, 404, 405, or equivalent or consent of instructor. Intensive study of the significant works of the Middle Ages, the Renaissance, the Golden Age, the Bourbon Ascendancy, etc. May be repeated for credit as subject matter changes.

599 Graduate Project (3)

Independent investigation of a substantial problem in the language or literature of any Hispanic country. The project must be approved by the graduate faculty of the Foreign Language Department prior to registration.

SPEECH AND DRAMA

(In the Division of Language Arts)

STAFF: Stansell (Department Head), Altenberg, Beaver, Campbell, Cathcart, Chase, Cullen, Daniel, Douglass, Fisher, Fitzpatrick, Gardemal, Gillen, Hillbruner, Holladay, Hollis, Huber, Kully, Loper, Oberle, L. Scott, Smith, Ubans.

BACHELOR'S DEGREE CURRICULUM

Major in Speech

Designed for students who (1) elect to study the liberal arts with an emphasis in speech, or (2) plan to pursue careers in which skill in public speaking is essential.

Lower Division

Speech 160—Public Speaking	3 units
Speech 161—Argumentation	3 units

Upper Division

Speech 400—Group Discussion	3 units
Speech 411—Persuasive Speaking	3 units
Speech 420—Oral Interpretation	3 units
Speech 467Y or Z—Great Speakers of the Western Tradition	3 units
Speech 468—Speech Analysis and Evaluation	3 units
Speech 397Y—Forensics	3 units
Select from the following	8-9 units

- Speech 397Z—Forensics (3)
- Speech 431—American Phonetics (2)
- Speech 432—Voice Science (2)
- Speech 434—Introduction to Speech Correction (3)
- Speech 467Y or Z—Great Speakers of the Western Tradition (3)
- American Studies 402—Ideas in America (3)
- English 405—Linguistic Science and Modern English Grammar (3)
- Psychology 420—Human Communication (3)
- Social Science 400—Scientific Methods in the Social Sciences (3)

32-33 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR SPEECH MAJOR

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
† Sp. 160—Pub. Speak.	3	Engl. 150—Written Expr.	3
Biol. Sci. 153—Prin. of Biology or Phys. Sci. 151	3	Biol. Sci. 153—Prin. of Biology or Phys. Sci. 151	3
Govt. 150—Govt. and Am. Soc.	3	Psych. 150—Human Behavior	3
Art 150—Art, Music, Dance	3	Phys. Educ. elective	1
P.E. 150	1	*Sp. 120—Intro. to Oral Interp.	3
Elective	3	Elective	6

* Recommended.

† Gen. Educ. requirement in "Communication" must be chosen in consultation with adviser.

SOPHOMORE YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Biol. Sci. 154—Prin. of Biology <i>or</i>		Sp. 161—Argumentation	3
Phys. Sci. 152	3	Gen. Educ. Soc. Sci. elective	3
Phil. 150—Phil. Ideas	3	Hist. 250—U. S. History	3
Engl. 250—Underst. Lit.	3	Sp. 197X—Forensic Activity *	1
Sp. 197W—Forensic Activity *	1	Electives	5
Electives	6		

JUNIOR YEAR

Sp. 397Y—Forensics	3	Sp. 400—Group Discussion	3
Sp. 420—Oral Interpretation	3	Sp. 467Y <i>or</i> Z—Great Speakers of	
H&S 350—Personal Health	2	the Western Tradition	3
Gen. Educ. elective	3	Electives	9
Electives	5		

SENIOR YEAR

Sp. 411—Persuasive Speaking	3	Speech or related electives	6
Sp. 468—Spch. Anal. and Eval.	3	Electives	9
Gen. Educ. elective	3		
Speech or related electives	3		
Elective	3		

Major in Drama

Designed for students who (1) elect to study the liberal arts with an emphasis in drama, or (2) plan to engage in professional work on the stage, screen, or television, or in careers in which skill in dramatic art is essential.

Lower Division

Speech 162—Acting Fundamentals	3 units
Speech 170—Analysis of Drama	3 units
Speech 172—Beginning Stagecraft	3 units

Upper Division

Speech 313Y—Theatrical Make-up	2 units
Speech 412Y—Advanced Acting	3 units
Speech 420—Oral Interpretation	3 units
Speech 440Y—Principles of Directing	3 units
Speech 443AB—Development of the Theater	6 units
Speech 473—Stage Scenery	3 units
Speech 396W—Play Production	3 units
Select <i>one</i> course from the following	3 units
English 424—Greek and Roman Drama (3)	
English 425—Modern Continental Drama (3)	
English 426—Modern British Drama (3)	
English 427—Modern American Drama (3)	
Select <i>two</i> courses from the following	5-6 units
Speech 313Z—Theatrical Make-up (2)	
Speech 395—Children's Theater (3)	
Speech 412Z—Advanced Acting (3)	
Speech 440Z—Principles of Directing (3)	
Speech 442Y—Playwriting (3)	
Speech 445—Survey of Broadcasting (3)	

* Recommended.

Speech 470—Stage Lighting (3)
 Speech 479—Stage Costuming (3)
 English 417—Interpreting Shakespeare (3)
 American Studies 402—Ideas in America (3)

40–41 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR DRAMA MAJOR

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Sp. 170—Anal. of Drama	3	Sp. 172—Beginning Stagecraft	3
*Sp. 150—Oral Expr. <i>or</i>		*Engl. 150—Written Expr. <i>or</i>	
Lang. Arts 150A	3	Lang. Arts 150B	3
Biol. Sci. 153—Prin. of Biology <i>or</i>		Biol. Sci. 153—Prin. of Biology <i>or</i>	
Phys. Sci. 151	3	Phys. Sci. 151	3
Govt. 150—Govt. and Amer. Soc.	3	Psych. 150—Human Behavior	3
Art 150—Art, Music, Dance	3	Phys. Educ. elective	1
P.E. 150	1	Elective (Recommended: Sp. 160)	3

SOPHOMORE YEAR

Sp. 162—Acting Fundament.	3	Gen. Educ. Soc. Sci. elective	3
Biol. Sci. 154—Prin. of Biology <i>or</i>		H&S 350—Personal Health	2
Phys. Sci. 152	3	Hist. 250—U. S. History	3
Phil. 150—Phil. Ideas	3	Electives	6
Engl. 250—Underst. Lit.	3	Elective	
Elective	3	(Recommended: Sp. 196W)	1
Elective			
(Recommended: Sp. 195W)	1		

JUNIOR YEAR

Sp. 396W—Play Production	3	Sp. 420—Oral Interpretatn.	3
Sp. 412Y—Advanced Acting	3	Speech or related electives	6
Gen. Educ. elective	3	Electives	6
Electives	7		

SENIOR YEAR

Sp. 440Y—Prin. of Directing	3	Sp. 443B—Develop. of the Theater	3
Sp. 443A—Develop. of the Theater	3	Speech or related electives	3
Sp. 473—Stage Scenery	3	Electives	9
Gen. Educ. elective	3		
Electives	3		

Major in Speech Correction

Designed for students who plan to engage in clinical speech correction in nonacademic programs.

Lower Division

Speech 160—Public Speaking	3 units
Speech 165—Voice and Diction	2 units

* Sp. 150 and Engl. 150 in either order make a sequence; Lang. Arts 150A and B make a separate sequence. Lang. Arts 150A or B may not be combined with Engl. 150 or Sp. 150.

Upper Division

Speech 431—American Phonetics	2 units
Speech 432—Voice Science	2 units
Speech 434—Introduction to Speech Correction.....	3 units
Speech 435Y—Advanced Speech Correction—Psychological.....	2 units
Speech 435Z—Advanced Speech Correction—Organic.....	2 units
Speech 437—Speech Problems in Cerebral Palsy.....	3 units
Speech 439Y—Clinical Practice in Speech Correction.....	2 units
Speech 398—Work-Study Assignments and Reports.....	1 unit
Education 420—Speech Reading	2 units
Education 427—Hearing and Its Measurement.....	3 units
Education 428—Speech Audiometry and Aural Rehabilitation.....	3 units
Audiology 429—Clinical Practice in Aural Rehabilitation.....	2 units
Psychology 301—Mental Hygiene	2 units
34 units	

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR SPEECH CORRECTION MAJOR

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
*Sp. 150—Oral Expr. <i>or</i>		Sp. 165—Voice and Diction.....	2
Lang. Arts 150A.....	3	*Engl. 150—Written Expr. <i>or</i>	
Biol. Sci. 153—Prin. of Biology <i>or</i>		Lang. Arts 150B.....	3
Phys. Sci. 151.....	3	Biol. Sci. 153—Prin. of Biology <i>or</i>	
Govt. 150—Govt. and Amer. Soc.	3	Phys. Sci. 151.....	3
Art 150—Art, Music, Dance.....	3	Psych. 150—Human Behavior.....	3
P.E. 150	1	Phys. Educ. elective.....	1
Electives	3	Elective	3

SOPHOMORE YEAR

Sp. 160—Publ. Speak.	3	Gen. Educ. Soc. Sci. elective.....	3
Biol. Sci. 154—Prin. of Biology <i>or</i>		H&S 350—Personal Health.....	2
Phys. Sci. 152.....	3	Hist. 250—U. S. History.....	3
Phil. 150—Phil. Ideas.....	3	Electives	8
Engl. 250—Understanding Lit.....	3		
Electives	4		

JUNIOR YEAR

Sp. 431—Amer. Phonetics	2	Sp. 435Z—Adv. Spch. Corr.: Organic	2
Sp. 434—Intro. to Spch. Corr.....	3	Educ. 420—Speech Reading.....	2
Educ. 427—Hearing and Measure	3	Sp. 432—Voice Science.....	2
Psych. 301—Mental Hygiene.....	2	Educ. 428—Aural Rehabiltn.....	3
Gen. Educ. elective.....	3	Electives	6
Electives	3		

SENIOR YEAR

Sp. 439Y—Clinical Prac.....	2	Sp. 437—Spch. Prob. in Cerebral Palsy	3
Audiology 429—Clinical Prac.....	2	Sp. 398—Work Study.....	1
Sp. 435Y—Adv. Spch. Corr.: Psychological	2	Electives	11
Gen. Educ. elective.....	3		
Electives	6		

* Sp. 150 and Engl. 150 in either order make a sequence; Lang. Arts 150A and B make a separate sequence. Lang. Arts 150A *or* B may *not* be combined with Engl. 150 *or* Sp. 150.

General Secondary Teaching Major

See also pages 151-152 for professional education requirements. A teaching minor in a different teaching field is also required for the general secondary credential. Candidates for the general secondary credential in speech are required to have collegiate courses in each of the following areas: composition, literature, speech, and drama or journalism.

Lower Division

Speech 160—Public Speaking <i>or</i>	
Speech 161—Argumentation	3 units
Speech 170—Analysis of Drama <i>or</i>	
Speech 172—Beginning Stagecraft	3 units

Upper Division

Speech 400—Group Discussion	3 units
Speech 420—Oral Interpretation	3 units
Speech 431—American Phonetics	2 units
Speech 464—High School Dramatics	2 units
Speech 465—High School Speech Arts	2 units
Speech 468—Speech Analysis and Evaluation	3 units
Speech 396W—Play Production <i>or</i>	
Speech 397Y—Forensics	3 units
Speech 443A—Development of the Theatre <i>or</i>	
Speech 467Y <i>or</i> Z—Great Speakers of the Western Tradition	3 units
Select <i>three</i> courses from the following	8-9 units
Speech 313Y—Theatrical Make-up (2)	
Speech 395—Children's Theater (3)	
Speech 410—Advanced Public Speaking (3)	
Speech 411—Persuasive Speaking (3)	
Speech 412Y—Advanced Acting (3)	
Speech 432—Voice Science (2)	
Speech 434—Introduction to Speech Correction (3)	
Speech 440Y <i>or</i> Z—Principles of Directing (3)	
Speech 442Y—Playwriting (3)	
Speech 443B—Development of the Theater (3)	
Speech 445—Survey of Broadcasting (3)	
Speech 467Y <i>or</i> Z—Great Speakers of the Western Tradition (3)	
Speech 470—Stage Lighting (3)	
Speech 473—Stage Scenery (3)	
Speech 479—Stage Costuming (3)	
English 417—Interpreting Shakespeare (3)	
English 427—Modern American Drama (3)	
American Studies 402—Ideas in America (3)	

Graduate Year

Six units selected from courses in the Department of Speech and Drama with the approval of the departmental adviser.....	6 units
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 41-42 units

SUGGESTED COURSE SEQUENCE FOR SPEECH MAJOR WITH GENERAL SECONDARY CREDENTIAL

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Biol. Sci. 153—Prin. of Biology <i>or</i>		Sp. 170—Anal. of Drama <i>or</i>	
Phys. Sci. 151	3	Sp. 172—Beginning Stagecraft	3
Govt. 150—Govt. & Am. Soc.	3	Engl. 150—Written Expr.	3
Art 150—Art, Music, Dance	3	Biol. Sci. 153—Prin. of Biology <i>or</i>	
P.E 150	1	Phys. Sci. 151	3
Elective <i>or</i> Minor	3	Psych. 150—Human Behavior	3
		Phys. Educ. elective	1
		Elective	2

SOPHOMORE YEAR

+ Sp. 160—Public Speaking <i>or</i>		Gen. Educ. Soc. Sci. elective	3
Sp. 161—Argumentation	3	H&S 350—Personal Health	2
Biol. Sci. 154—Prin. of Biology <i>or</i>		Hist. 250—U.S. History	3
Phys. Sci. 152	3	Gen. Educ. elective	3
Phil. 150—Phil. Ideas	3	Minor	5
Engl. 250—Underst. Lit.	3		
Gen. Educ. elective	3		

JUNIOR YEAR

Sp. 396W—Play Production <i>or</i>		Sp. 443—Hist. of Theater <i>or</i>	
Sp. 397Y—Forensics	3	Sp. 467Y <i>or</i> Z—Great Speakers of	
Sp. 400—Group Discussion	3	the Western Tradition	3
Sp. 420—Oral Interpretation	3	Educ. 471—Sec. Educ.	5
Sp. 465—High Sch. Sp. Arts	2	Educ. 490—Audio-Visual	2
Educ. 300—Intro. to Cred. Prog. N. Cr.		Minor	3
Educ. 413—Psych. & Soc.	5	Speech or related electives	3

SENIOR YEAR

Sp. 431—Amer. Phonetics	2	Sp. 468—Sp. Anal. & Eval.	3
Sp. 464—High Sch. Drama	2	Educ. 493—Methods (Major)	2
Educ. 480—Fund. Counsel. & Guid.	2	(Minor)	2
Minor	6	Minor	6
Speech or related electives	3	Speech or related electives	3

GRADUATE YEAR

Educ. 442Y—Directed Teaching	3	Educ. 442Z—Directed Teaching	3
Educ. 444Y—Prob. in Sec. Teach.	1	Educ. 444Z—Prob. in Sec. Teach.	2
Minor	3	Electives (Recommended: Speech	
Electives (Recommended: Speech		courses in 500 series)	9-10
courses in 500 series)	8-9		

General Secondary Teaching Minor

Lower Division

Speech 160—Public Speaking	3 units
Speech 170—Analysis of Drama <i>or</i>	
Speech 172—Beginning Stagecraft	3 units

† Gen. Educ. requirement in "Communication" must be chosen in consultation with adviser.

Upper Division

Speech 464—High School Dramatics	2 units
Speech 465—High School Speech Arts	2 units
Speech 468—Speech Analysis and Evaluation	3 units
Speech 396W—Play Production <i>or</i>	
Speech 397Y—Forensics	3 units
Speech 400—Group Discussion <i>or</i>	
Speech 473—Stage Scenery	3 units
Select <i>one</i> course from the following	2-3 units
Speech 395—Children's Theater (3)	
Speech 410—Advanced Public Speaking (3)	
Speech 411—Persuasive Speaking (3)	
Speech 412Y—Advanced Acting (3)	
Speech 420—Oral Interpretation (3)	
Speech 431—American Phonetics (2)	
Speech 432—Voice Science (2)	
Speech 440Y—Principles of Directing (3)	
Speech 467Y <i>or</i> Z—Great Speakers of the Western Tradition (3)	

21-22 units

MASTER OF ARTS DEGREE CURRICULA**Master of Arts Degree in Speech and Drama**

1. Prerequisites: Course prerequisites, including at least 20 units of undergraduate work in speech and drama. Formal conference with assigned adviser is required for formulation of the degree program.
2. Area of concentration:
 - Select from the following at least two courses 6 units
 - Speech 521—Seminar in Rhetorical Theory (3)
 - Speech 522—Seminar in Argumentation, Discussion, and Debate (3)
 - Speech 567—Studies in American Public Address (3)
 - Speech 560—Speech Education in America (3)
 - Select from the following at least two courses 6 units
 - Speech 512—Seminar in Theories of Acting (3)
 - Speech 520—Seminar in Dramatic Theory (3)
 - Speech 530—Studies in Oral Interpretation (3)
 - Speech 573—Seminar in Experimental Theater (3)
 - Select one course from the following 3 units
 - Speech 515—Performance (3)
 - Speech 599—Graduate Project (3)

With approval of adviser select courses pertinent to the program in the areas of speech, speech correction, drama, communications, or English language 9 units
3. Courses offered outside the Department of Speech and Drama approved by adviser 6 units
4. Written comprehensive examination for the M.A. in speech and drama. When the examining committee deems it necessary, the final written comprehensive examination may be supplemented with an oral comprehensive examination.

Master of Arts Degree in Speech

1. Prerequisites: Course prerequisites, including at least 20 units of undergraduate work in speech. Formal conference with assigned adviser is required for formulation of the degree program.

2. Area of concentration:

Graduate Core Program—

Speech 521—Seminar in Rhetorical Theory	3 units
Speech 522—Seminar in Argumentation, Discussion, and Debate	3 units
Speech 567—Studies in American Public Address	3 units
Speech 560—Speech Education in America	3 units

Minor fields in speech: Candidates must complete at least one course in each of the three areas below. The advanced courses should be selected when the introductory courses have been previously completed.

A. Oral Interpretation 3 units

Speech 420—Oral Interpretation (3) *or*
Speech 530—Studies in Oral Interpretation (3)

B. Speech Correction* 3-4 units

Speech 434—Introduction to Speech Correction (3) *or*
Speech 435Y—Advanced Speech Correction—Psychological (2)
and
Speech 435Z—Advanced Speech Correction—Organic (2)

C. Drama 3 units

Speech 443A—Development of the Theater (3) *or*
Speech 520—Seminar in Dramatic Theory (3)

Elective in Speech selected with approval of adviser 3 units

3. Courses offered outside the Department of Speech and Drama approved by adviser 6 units

4. Written comprehensive examination for the M.A. in speech. When the examining committee deems it necessary, the final written comprehensive examination may be supplemented with an oral comprehensive examination.

Master of Arts Degree in Drama

1. Prerequisites: Course prerequisites, including at least 20 units of undergraduate work in drama, speech, dramatic literature, or communications. Formal conference with assigned adviser is required for formulation of the degree program.

2. Area of Concentration:

Graduate Core Program—

Speech 512—Seminar in Theories of Acting	3 units
Speech 520—Seminar in Dramatic Theory	3 units
Speech 573—Seminar in Experimental Theater	3 units
Select <i>one</i> course from the following	3 units
Speech 515—Performance (3)	
Speech 599—Graduate Project (3)	

*Select at least *two* courses from the following 6 units

Speech 440YZ—Principles of Directing (3-3)
Speech 442Y—Playwriting (3)
Speech 443AB—Development of the Theater (3-3)
Speech 445—Survey of Broadcasting (3)

*Select at least *two* courses from the following 6 units

Speech 470—Stage Lighting (3)
Speech 473—Stage Scenery (3)
Speech 479—Stage Costuming (3)

3. From courses offered outside the Department of Speech and Drama approved by adviser 6 units

* If all courses in this sequence or their equivalents have previously been completed in upper division, appropriate substitutions may be made by the adviser.

4. Written comprehensive examination for the M.A. in drama. When the examining committee deems it necessary, the final written comprehensive examination may be supplemented with an oral comprehensive examination.

Master of Arts Degree in Speech Correction and Audiology

(Offered jointly with the Department of Special Education)

1. Prerequisites: An appropriate baccalaureate degree from an accredited institution with a major in speech correction and hearing, or a credential in speech correction and lip-reading, or the equivalent in course work. Formal conference with assigned adviser is required for formulation of the degree program.
2. Graduate Core Program:

Speech 535—Seminar in Speech Disorders	3 units
Speech 537—Seminar in Speech Pathology: Stuttering	3 units
Speech 538—Seminar in Neuropathologies of Speech	3 units
3. Areas of Concentration—Candidates may select Speech Correction *or* Audiology as their area of concentration.
 - A. Speech Correction:

Speech 436—Diagnostic Clinic	2 units
Speech 539YZ—Clinical Practice in Speech Correction	4 units
In consultation with adviser select at least two courses from the following	6 units
Education 536—Seminar in Hearing (3)	
Audiology 511—Advanced Audiology (3)	
Audiology 540—Audiological Instrumentation (3)	
 - B. Audiology:

Education 536—Seminar in Hearing	3 units
Audiology 511—Advanced Audiology	3 units
Audiology 540—Audiological Instrumentation	3 units
In consultation with adviser select at least three units from the following	3 units
Audiology 529—Advanced Clinical Practice in Aural Rehabilitation (1-3)	
Audiology 541—Advanced Clinical Practice in Hearing Evaluation (1-1-1)	
4. Electives

9 units

In consultation with adviser select nine additional units to complete the thirty unit requirement. *Recommended:* Psychology 410—Abnormal Psychology (3), Psychology 412—Child Psychology (3), Psychology 438—Clinical Psychology (3), Psychology 512—Psychology of Behavior (3)

COURSES OF INSTRUCTION

Lower Division

101 Parliamentary Practice (1) Fall, Spring

An overview of social and economic organizations, their structure and functions with emphasis upon conducting meetings, functions of the chairman, duties of officers, and techniques of parliamentary law.

120 Introduction to Oral Interpretation (3) Spring

Development of basic skills in reading aloud; analysis of selections and practice in oral reading; special emphasis on platform behavior, evaluation of material, and the mechanics of oral interpretation.

150 Oral Expression (3) Fall, Spring (General Education)

Fundamentals of oral expression. Experience in organization, reasoning, delivery and criticism through practical application in individual and group situations.

160 Public Speaking (3) Fall

Preparation, organization, and delivery of practical speeches. Emphasis on audience analysis and speeches for special occasions.

161 Argumentation (3) Spring

Principles of argumentation: Reasoned discourse; methods of logical analysis and reflective thinking. Practical application: Kinds and forms of debate; adaptation of materials to audience situations, argumentative speeches and practice debates on current issues.

162 Acting Fundamentals (3) Fall, Spring

Introduction to the basic principles and techniques of acting as an artistic discipline. Performances of laboratory scenes, readings, and exercises.

165 Voice and Diction (2) Fall, Spring

Studies in phonation, articulation, and pronunciation. Special attention to diction for classroom teachers, public speakers, and actors.

170 Analysis of Drama (3) Fall

Introduction to the principles of dramatic art. Consideration of the elements of drama, dramatic structure, types and styles, evaluation and appreciation through study and workshop presentation of representative plays.

172 Beginning Stagecraft (3) Spring

Introduction to technical theater practices through lectures, demonstrations, and workshop experience. Basic elements of theater crafts with emphasis on design, construction, and painting.

195W-X-Y-Z Stage Crew Activity (1-1-1-1)* Fall, Spring

Active participation in production crew work in college-sponsored dramatic presentations. Crew assignments may include lighting, scenery, costuming, props, and house management.

196W-X-Y-Z Rehearsal and Performance (1-1-1-1)* Fall, Spring

Active participation in college-sponsored dramatic activities. Primary emphasis in assignments on acting parts and directorial assistance, but may include publicity and house management.

197W-X-Y-Z Forensic Activity (1-1-1-1)* Fall, Spring

Participation in intercollegiate forensic activities.

* A maximum of four units of Speech 195, 196, and 197 may be applied toward graduation requirement.

Upper Division
SPECIAL STUDIES

313Y-Z Theatrical Make-up (2-2) Fall, Spring

Theory and practice in theatrical makeup for stage, television and cinema. Emphasis on development of individual skill in techniques of character analysis, application in pigment, plastic, hair makeup, selection and use of makeup equipment.

395 Children's Theater (3) Fall

Play production for the child audience. Application of standard theater practice to children's theater production; problems in directing adult and child casts; organization and management of children's theater groups. Practical experience through participation in a college sponsored children's theater production.

396W-X-Y-Z Play Production (3-3-3-3) Fall, Spring

Prerequisite: Consent of instructor. Participation under faculty supervision in the planning, preparation, and presentation of college-sponsored dramatic presentations; emphasis on acting and assistant director assignments.

397Y-Z Forensics (3-3) Fall, Spring

Prerequisite: Consent of instructor. Participation under faculty supervision in the planning, preparation, and presentation of college-sponsored speech and forensic activities; emphasis on preparation for and participation in tournament events.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

ORAL SKILLS

400 Group Discussion (3) Fall, Spring

The role of group discussion in a democratic society. Principles and methods of group discussion in problem solving and learning situations. Development of individual skills in discussion preparation, participation, and leadership through practical application.

410 Advanced Public Speaking (3) Fall, Spring

Prerequisite: Speech 160 or equivalent. Study and application of theories of rhetoric and public address. Emphasis on special methods, occasions, and materials for advanced performances. Development of skills through preparation, organization, and delivery of speeches.

411 Persuasive Speaking (3) Fall

Prerequisite: Consent of instructor. Methods of persuasion with emphasis upon ethical, logical, and pathetic proofs.

412Y-Z Advanced Acting (3-3) Fall, Spring

Prerequisite: One lower division course in acting fundamentals or equivalent. Gesture, movement, timing, and pointing; problems of characterization; styles of acting and characteristics of acting in various dramatic media. Presentation of scenes from plays of various types. Emphasis on improvisations as a method of developing acting talent. May be taken in any sequence.

420 Oral Interpretation (3) Fall, Spring

Prerequisite: Speech 120 or consent of instructor. Theory of oral interpretation; readings in poetry and prose.

SPEECH SCIENCE AND CORRECTION**431 American Phonetics (2) Fall, Spring**

Systematic analysis of the sounds of speech and the use of the International Phonetic Alphabet. Application of phonetic principles to articulation, to the teaching of speech, and to speech correction.

432 Voice Science (2) Spring

The production of speech, its acoustic characteristics, and the body structures and their functions involved in speech processes.

434 Introduction to Speech Correction (3) Fall, Spring

Characteristics, causes, and treatment of speech defects. Designed to acquaint the special education teacher with common speech problems of children and to serve as an introductory course for speech therapists.

435Y Advanced Speech Correction—Psychological (2) Fall

Prerequisite: Speech 434 or equivalent. Theories, diagnosis and treatment of speech disorders originating in or maintained by emotional factors including delayed speech, stuttering, severe functional articulation problems, etc.

435Z Advanced Speech Correction—Organic (2) Spring

Prerequisite: Speech 434 or equivalent. Theories, diagnosis and treatment of those speech disorders resulting from or occurring concomitantly with organic abnormalities of the physical mechanism. Areas which will receive special attention include structural oral deformities, cleft lip and palate, cerebral palsy and aphasia.

436 Diagnostic Clinic in Speech Correction (2)

Prerequisites: Speech 438Y, 439Y. Procedures for studying and evaluating various etiological factors by observation and experience with speech handicapped individuals.

437 Speech Problems in Cerebral Palsy (3) Spring

Prerequisite: Speech 434 or equivalent. Speech problems associated with cerebral palsy. Normal function of the speech mechanism is contrasted with that of the orthopedically handicapped in consideration of disturbances of respiration, hearing, articulation, language development, and cerebration. Diagnostic and therapeutic techniques presented.

438Y-Z Group Techniques in Speech Correction (2-2) Fall, Spring

Prerequisites: Speech 431 and 434 or 461 or equivalent. Observation and supervised experience in group therapy with speech-handicapped children including the preparation of and utilization of materials suitable for group speech correction in the public schools.

439Y-Z Clinical Practice in Speech Correction (2-2) Fall, Spring

Prerequisites: Speech 435Y and 435Z, or equivalents; Speech 438 for special education credential in speech correction and lip-reading. Observation and supervised clinical experience in individual diagnostic and therapeutic procedures with the more seriously speech-handicapped children and adults.

DRAMATIC ARTS

440Y-Z Principles of Directing (3-3) Fall, Spring

Prerequisite: A course in acting. Lectures and practice in problems of stage directing.

442Y-Z Playwriting (3) Fall, Spring

Prerequisites: At least one upper division course in dramatic literature and permission of the instructor. Workshop in the planning, preparation, and writing of manuscripts for stage, screen, and television. Emphasizes handling of dramatic materials, play structure, characterization, and appropriate dialogue. Reading and experimental production of superior manuscripts.

443A-B Development of the Theater (3-3) Fall

Development of the theater from its prehistoric beginnings to the present with emphasis on the most productive periods.

BROADCASTING

445 Survey of Broadcasting (3) Spring

Survey of the principles and practices in American broadcasting with special emphasis on the techniques of television programming and production through lectures, reports, field trips, and selected viewing.

449YZ Television Performance, Production, and Directing (3-3) Fall

Television program production with an introduction to the principles and techniques for improvement of announcing and performing skills. Aesthetics of picture composition and principles, camera movement, lighting, control room operations, film, and direction of various program types.

SPEECH EDUCATION

460 Speech and Dramatic Activities in Elementary Schools (3) Fall, Spring

Theory and techniques of creative dramatics, puppetry, choric speaking, and storytelling. Designed primarily for kindergarten, primary, and elementary teachers. Also valuable to recreation workers.

461 Speech Problems in the Classroom (3) Fall, Spring

Identification of common deviations from the normal pattern of development and function of oral language in elementary schoolchildren. Techniques appropriate for speech improvement and for establishing proper speech habits. Designed for kindergarten, primary, and elementary teachers; not for special education or preprofessional therapy majors. (Replaces Speech 434 in composite minor program.)

464 High School Dramatics (2) Fall, Spring

Theory and techniques of dramatic production in secondary schools. Requires attendance at typical high school dramatic presentations. Not a methods course; emphasis on subject field skills.

465 High School Speech Arts (2) Fall, Spring

Techniques of speech in the secondary school. Survey of textbooks and materials suitable for secondary schools. Includes public speaking, oral interpretation, discussion, debate, and other speech activities. Requires attendance at high school speech arts activities. Not a methods course; emphasis on subject field skills.

RHETORIC AND PUBLIC ADDRESS

467Y-Z Great Speakers of the Western Tradition (3) Fall, Spring

Prerequisite: One upper division course in public speaking or its equivalent. Treatment of great speakers and their speeches from the Greek period to the present. Lectures, discussions, reading. May be taken in any sequence.

468 Speech Analysis and Evaluation (3) Fall

Prerequisite: A course in public speaking. Approaches to rhetorical analysis and evaluation of speeches. Methods of classroom application.

TECHNICAL THEATER

470 Stage Lighting (3) Spring

Prerequisite: Lower division course in electricity, stage lighting, or consent of instructor. Theory and practice of stage lighting for plays, pageants, operas, dance, television, and other dramatic productions for professional, educational, and community presentations. Designed to serve speech, drama, music, industrial arts, and recreation majors. Practical experience through participation in college-sponsored productions.

473 Stage Scenery (3) Fall

Prerequisite: Lower division course in stagecraft or consent of instructor. Theory and practice of set design; advanced techniques in scenery construction and production organization. Designed to serve speech, drama, music, industrial arts, art, and recreation majors. Practical experience through participation in college-sponsored productions.

479 Stage Costuming (3) Fall

Theory and practice in constructing costumes for plays, operas, pageants, the dance, television, and other dramatic productions for profes-

sional, educational, and community presentations. Practical experience in execution of costumes for college-sponsored productions.

INDEPENDENT STUDIES

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with the sponsor before registration; progress meetings held regularly.

GRADUATE COURSES

Graduate standing is prerequisite to registration in the following courses:

512 Seminar in Theories of Acting (3) Fall

Prerequisite: At least one upper division course in acting or directing. Studies in the major theories of acting from Diderot to the present; special emphasis on origins, aesthetics, and psychology of acting.

515 Performance (3) Spring

Prerequisite: An undergraduate course in speech or drama, or consent of instructor. Intensive study of the organization, presentation, and theory of the use of significant themes and ideas in the professional lecture and lecture recital. Planning, practice, and presentation of monodramas, oral readings, book reviews, and speeches for use in classroom and community.

520 Seminar in Dramatic Theory (3) Fall

Prerequisite: At least one upper division course in dramatic theory or dramatic literature. Backgrounds in theatrical art; analysis of the aesthetic principles and content of the theater; selected problems in the philosophy of dramatic art.

521 Seminar in Rhetorical Theory (3) Spring

Prerequisite: At least one upper division course in public address. Selected studies in the philosophy of speech rhetoric and the influence of rhetoric on historic and contemporary movements.

522 Seminar in Argumentation, Discussion, and Debate (3) Fall

Prerequisite: At least one upper division course in public address. Analysis of significant literature, major trends, and theories of argumentation, discussion, and debate, and an intensive study of the relationship of these areas to each other.

530 Studies in Oral Interpretation (3) Spring

Prerequisite: Speech 420 or consent of instructor. Analysis of the main theories of the art of interpretation with special emphasis on their relation to contemporary theory and practice.

535 Seminar in Speech Disorders: Voice and Articulation Problems (3) Fall

Prerequisite: Speech 435YZ. Intensive analysis of vocal and articulatory problems associated with structural conditions such as cleft palate, malocclusion and laryngeal pathologies. Special emphasis on new approaches to examination, diagnosis and therapeutical procedures.

536Y-Z Advanced Clinical Practice in Speech Correction (2-2) Fall, Spring

Prerequisite: Speech 439. Advanced clinical procedures in diagnosis and therapy with speech handicapped children and adults.

537 Seminar in Speech Pathology: Stuttering (3) Fall

Prerequisite: Speech 435YZ. Theory, research, methodology in diagnosis and treatment of stuttering.

538 Seminar in Neuropathologies of Speech (3)

Prerequisite: Speech 435YZ. Intensive analysis of speech disorders associated with lesions of the central nervous system. Clinical implications from demonstration and observation.

560 Speech Education in America (3) Spring

Prerequisite: At least one upper division course in speech education. Major trends in the development of speech education in America; the evolution of the speech curriculum; recent developments in pedagogical theory and method.

567 Studies in American Public Address (3) Fall

Prerequisite: Speech 467. Examination and analysis of speeches and debates about selected major issues in American affairs. Some attention given to British speakers who affected the course of American affairs.

573 Seminar in Experimental Theater (3) Spring

Prerequisites: At least two upper division courses in dramatic literature and/or dramatic theory. The influential personalities, masterpieces of dramatic literature, and significant theatrical movements in America and Europe which have contributed to experimentation in the dramatic arts of modern times.

599 Graduate Project (3) Fall, Spring

Prerequisites: Admission to candidacy for master's degree; consent of instructor. The investigation and written presentation of a selected problem in speech or drama.

ZOOLOGY

(In the Division of Science and Mathematics)

STAFF: Lowrie (Department Head), Bair, Clothier, Eriksen, Hanson, Hovanitz, Ross, Vance, Welsh.

BACHELOR'S DEGREE CURRICULUM

Major in Zoology

The major program in zoology is designed to provide a broad training in animal biology. Graduation with such a major in zoology qualifies a student for (a) graduate study; (b) employment in federal and state civil service, particularly in fish and game work and in park service; (c) employment in certain types of industrial laboratories such as the pharmaceutical houses; (d) positions as technicians in university research projects; (e) natural history museum work.

Lower Division

Zoology 100—General Zoology	5 units
Botany 100—General Botany	5 units
Chemistry 101—General Chemistry	5 units
Physics 101—Physics I	4 units
Physics 102—Physics II	4 units
Mathematics 100—Basic Mathematical Analysis.....	4 units

Upper Division

Biological Science 410—Genetics	3 units
Biological Science 460—General Ecology	4 units
Zoology 440—Invertebrate Zoology	4 units
Zoology 423—Comparative Anatomy <i>or</i>	
Zoology 424—Comparative Embryology	4 units
Zoology 430—Animal Physiology	4 units
Chemistry 308—Elementary Organic Chemistry.....	4 units

Three courses from the following (selected with the approval of an adviser)..... 9 units

- Biological Science 411—Heredity and Evolution (3)
- Biological Science 420—Histological Methods (3)
- Biological Science 421—Cytology (4)
- Conservation 461—Conservation of Wildlife (3)
- Botany 440—Plant Classification (4)
- Microbiology 200—General Microbiology (5)
- Zoology 422—Animal Histology (4)
- Zoology 423—Comparative Anatomy (4)
- Zoology 424—Comparative Embryology (4)
- Zoology 441—General Entomology (4)
- Zoology 442—Medical Entomology (3)
- Zoology 443—Cold-blooded Vertebrates (3)
- Zoology 444, 445—Birds of California (2-2)
- Zoology 446—Mammalogy (4)
- Zoology 447—Marine Zoology (3)
- Zoology 462, 463—Parasitology, Animal Parasitology (3-1)

59 units

SUGGESTED FOUR-YEAR COURSE SEQUENCE FOR ZOOLOGY MAJOR

FRESHMAN YEAR

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Zool. 100—Gen. Zoology.....	5	Bot. 100—Gen. Botany.....	5
Chem. 101—Gen. Chemistry.....	5	Math. 100—Basic Math. Analysis....	4
†Engl. 150—Written Expr. <i>or</i>		†Sp. 150—Oral Expr. <i>or</i>	
Lang. Arts 150A.....	3	Lang. Arts 150B.....	3
Govt. 150—Govt. & Amer. Soc.....	3	Art 150—Art, Music, Dance.....	3
		P.E. 150	1

SOPHOMORE YEAR

Physics 101—Physics I.....	4	Physics 102—Physics II.....	4
Chem. 308—Elem. Organic Chem. 4		Hist. 250—U. S. History.....	3
Phil. 150—Phil. Ideas.....	3	Engl. 250—Underst. Lit.....	3
Phys. Educ. elective.....	1	Psych. 150—Human Behavior.....	3
Gen. Educ. Soc. Sci. elective.....	3	Elective	3
Elective	2		

JUNIOR YEAR

Zool. 423—Comp. Anat. <i>or</i>		Zool. 440—Invertebrate Zoology....	4
Zool. 424—Comparative Embry....	4	*Zool. electives	6-8
*Zool. electives	3-4	Electives	3-5
H&S 350—Personal Health.....	2		
Electives	5		

SENIOR YEAR

Bio. Sci. 410—Genetics.....	3	Bio. Sci. 460—Gen. Ecology.....	4
Gen. Educ. elective.....	3	Zool. 430—Animal Physio.....	4
Electives	9	Gen. Educ. elective.....	3
		Electives	4

Premedical preparation:

The requirements for admission to medical schools vary somewhat and it is recommended that the student determine the exact program required by the medical school of his choice. This should be done with the premedical adviser in the Division of Science and Mathematics as early in the student's college career as possible. While the majors in zoology, microbiology, or chemistry will not meet all premedical requirements, by proper choice of elective courses the student completing any one of these majors can meet the requirements for most medical schools.

Predental preparation:

The predental student may fulfill the course requirements for admission to dental school by insuring that his program contains courses prescribed by the various dental colleges. He should see the predental adviser in the Division of Science and Mathematics at his earliest convenience to plan his program.

* Selected with the approval of an adviser.

† See "Note" on page 61.

COURSES OF INSTRUCTION

100 General Zoology (5)

Introduction to the study of zoology. Basic concepts in zoology are considered in an integrated manner and groundwork is laid for future study in zoological sciences. Laboratory experience with major techniques common to biological sciences. Three hours lecture; six hours laboratory.

398 Work-Study Assignments and Reports (1-2) Fall, Spring

Prerequisite: Active, approved employment under the work-study program. Analysis and reports of the student's performance; regular group meetings.

422 Animal Histology (4) Fall

Prerequisites: Zoology 100. Microscopic characteristics of tissues and organs. Mammalian tissue emphasized; amphibian tissue used when its simplicity will aid in understanding. Lecture two hours; laboratory six hours.

423 Comparative Anatomy (4) Fall, Spring

Prerequisite: Zoology 100. Evolution of vertebrate structure and organ systems including chief environmental adaptations. Laboratory limited to the comparative morphology of vertebrate types, emphasizing mammalian anatomy. Lecture two hours; laboratory six hours.

424 Comparative Embryology (4) Fall, Spring

Prerequisite: Zoology 100. Survey of the development of the mammal from egg to foetus; laboratory studies of chick and pig embryos. Histogenesis and organogenesis, and physiology of reproductive tract. Lecture two hours; laboratory six hours.

430 Animal Physiology (4) Fall, Spring

Prerequisites: Zoology 100, Chemistry 101 (Physics is desirable). Study of the function of animal systems in vertebrates. Emphasis on control and interrelations of different organ systems. Uses and manipulation of basic equipment in physiology laboratory. Lecture two hours; laboratory six hours.

440 Invertebrate Zoology (4) Spring

Prerequisites: Zoology 100. Characteristics and natural history of the invertebrates. The major groups of animals without backbones arranged in an evolutionary order from single-celled animals to primitive chordates. Emphasizes forms characteristically found in this region. Lecture two hours; laboratory or field work six hours.

441 General Entomology (4) Fall

Prerequisites: Zoology 100, Zoology 440 and Bot. 440 recommended. Study of the anatomy, physiology, ecology, habits, and distribution of insects; emphasis on species of California and the West. Principles of entomology stressed as well as giving an appreciation of esthetics

and economic importance. Techniques for observation, capture, preservation, and display of insects. Lecture two hours; laboratory or field work six hours.

442 Medical Entomology (3) Spring

Prerequisite: Zoology 100. The role of arthropods, especially the insects, as transmitters of human animal diseases. Stresses classification, structure, life histories, and practical applications. Lecture two hours; laboratory three hours.

443 Cold-blooded Vertebrates (3) Spring

Prerequisite: Zoology 100. Biology, classification, and ecology of California fishes, amphibians, and reptiles. Lecture two hours; laboratory or field trips three hours.

444 Birds of California (2) Fall

Acquaintance with Pacific Coast and desert birds by specimens, lecture, and field study. Classification, structure, habits, field recognition, ecology; migration and distribution. Lecture one hour; laboratory or fieldwork three hours.

445 Birds of California (2) Spring

Acquaintance with Pacific Coast and desert birds by specimens, lecture, and field study. Classification, structure, habits, field recognition, ecology; nesting and bird songs. Lecture one hour; laboratory or fieldwork three hours.

446 Mammalogy (4) Fall

Prerequisite: Zoology 100. Natural history, identification and classification of mammals together with field techniques. Emphasis on mammals of western states. Lecture two hours; laboratory or fieldwork six hours.

447 Marine Zoology (3) Fall

Prerequisite: Zoology 100. Study of the sea as a life environment. Field and laboratory familiarization with local marine animals and their habitats. Lecture two hours; laboratory or field work three hours.

462 Parasitology (3) Spring

Prerequisite: Zoology 100. Parasitic protozoa and helminths of man; emphasis on classification and identification. Life cycles of representative forms. Lecture two hours; laboratory three hours. (Formerly Microbiology 330.)

463 Animal Parasitology (1) Spring

To accompany and supplement Zoology 462. Emphasizes the broader aspects of parasitism shown by study of parasitic relationships in many animal groups.

499 Independent Study (1-3) Fall, Spring

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

GRADUATE COURSE**560 Animal Ecology (2) Spring, Fall**

Prerequisites: Bachelor degree in botany, zoology or biological science, including general ecology and preferably general entomology and plant classification, or consent of instructor. Advanced studies in the ecological relationships of animals with emphasis on synecology. Lecture one hour; laboratory or field work three hours.

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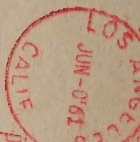


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